# International Conference on Contemporary Researches in Engineering, Science, Management & Arts (ICCRESMA)

*"Contemporary Research Contributions Towards Holistic Global Restructuring"*

ICCRESMA 2022

**27-29 January 2022**

*Created & Powered By*

**Centre for Research & Training (CRT)**
**National Foundation for Entrepreneurship Development (NFED)**
Coimbatore, Tamil Nadu, India

**KVJ. Prof. Dr. R. Ganesan**

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**National Foundation for Entrepreneurship Development (NFED)**
Coimbatore - 641011, Tamil Nadu, India
Ph: +91-7708647015
E-mail: info.nfed@gmail.com
Website: www.nfedindia.org | nfedconferences.org


# Conference Proceedings

*Great Men are never born; they are created through their wise actions out of self-realization and selflessness to enlighten millions as destined by the eternal master*

*- KVJ. Prof. Dr. R. Ganesan*

# Acknowledgements

I express my sincere thanks to our Conference Director, Mrs. Ramya Kandavel for successfully organizing and hosting the second International Conference on Contemporary Researches in Engineering, Science, Management & Arts - ICCRESMA 2022.

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I express my hearty thanks to all the distinguished international keynote speakers Asso. Prof. Dr. Araby Madbouly, Mr. Nanda Kumar, Prof. Dr. Patrick Osa. Oviasuyi, Mrs. Theviga Rani Wemel, Ms. Saeeda Ahmed, Prof. Dr. Jari Salo, Prof. Dr. Nazrul Islam, Dr. S. Anuzsiya and Ms. Mireille Toulekima for their august presence and enthralling keynote deliverance.

I heartily thank the distinguished national keynote speakers Prof. Dr. Ratna Nashine, Prof. Dr. Garima Gupta, Prof. Dr. M. Chandrasekaran, Prof. Dr. Mary Cherian, Prof. Dr. B. Surekha, Prof. Dr. Gunita Arun Chandhok, Prof. Dr. Tattwamasi Paltasingh and Asso. Prof. Dr. Arti Chandani for their benign presence and enlivening keynote address.

I also express my sincere thanks to the distinguished valedictory speakers, Prof. S. Magesh, Prof. Dr. V. Sasirekha, Asso. Prof. Dr. Reshmy Krishnan and Mr. Owaiz Khan for their esteemed presence and exuberant valedictory address.

I extend my profound gratitude to all the Session Chairs from different states of India for their invaluable time and scholarly services.

I also express my sincere thanks to the organizing secretaries and organizing committee members and facilitators of NFED for their continuous support in successfully conducting this three-day international conference.

Our sincere thanks to all the Authors and Research Scholars from various academia and organizations for submitting their invaluable research contributions to this international conference.

We thank the media and friends for their constant encouragement and support for publicizing this international conference across their networks and groups.

Sd/-

KVJ. Prof. Dr. R. Ganesan
Conference Chair, ICCRESMA 2022
&
Chairman, NFED

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# Conference Preamble

The advent of globalization has necessitated the advancements in science & technology towards its utility through effective management practices and righteous approaches. This is in turn, forcefully triggered the new vistas in the research to address the emerging trends in all the industry and service sectors with time. Also, facilitates to overcome obsoletion with frequent entrepreneurial innovations in terms of ergonomic aspects for societal wellness. The contribution of researches in the past has witnessed only interim growth and development. However, it could not wholly gauge the systematic sequences in terms of development throughout so as to meet the overall requirements of mankind in terms of achieving sustenance and stability. The reason could be lack of integration of researches across various disciplines and its integrity towards achieving the holistic wellbeing of society. Furthermore, this situation continues due to uni-discipline focus, wherein the integration perspective towards different streams and its research disciplines and its contributions are not fully integrated. The reality of conducting any research is to impart wisdom and it is basically interwoven with multifaceted applications for achieving socio-economic development of communities. Moreover, the current global scenario is ever-changing and demands balanced growth and promulgation in every aspect of livelihood effectiveness, wherein sustenance becomes more challenging in the ensuing years. This compels the knowledge sharing through congregation of research across inter-disciplines and multi-disciplines for upbringing the overall socio-economic development. Keeping these aforementioned aspects in view, the international conference intends to radically drive on the paradigms of contemporary researches in sciences (basic sciences, medical sciences, paramedical sciences, social sciences, etc.), engineering, technology, management and arts (including humanities). The conference intends to have knowledge integration through understanding the diverse researches to facilitate the upbringing of overall sustenance and bring in a phenomenal development to meet the future challenges. Hence, the conference has been officially coined as ‘International Conference on Contemporary Researches in Engineering, Science, Management and Arts (ICCRESMA)’. The aforementioned international conference has been created and powered by Centre for Research & Training (CRT), National Foundation for Entrepreneurship Development (NFED), Coimbatore, Tamil Nadu and officially scheduled on 27-29 January 2022 to gauge and garner the inter-disciplinary and multi-disciplinary research contributions across the nation and globe for knowledge dissemination.

Sd/-

KVJ. Prof. Dr. R. Ganesan
Conference Chair, ICCRESMA 2022
&
Chairman, NFED

# Conference Objectives

To highlight the holistic research contributions in accordance with current trends and future challenges for societal upliftment and global development

To congregate the contemporary researches across various academic and industrial domains for upbringing socio-economic development

To act as a platform for global knowledge sharing and information dissemination channel for overall understanding of various research aspects towards transformation, sustenance and growth

To encourage and promulgate the research acumen of students, researchers, scholars, academicians and practitioners from various academia, organization and industry / corporate

NFED is a unique organization which is predominantly into promulgating entrepreneurship cult across the nation. NFED is driving and thriving on socialistic notion with righteous academicians, corporate citizens and entrepreneurs in its fold, which is established as virtual organization, since 2003 and registered as a Trust on 7th November 2013 towards accomplishing its mission 'In Pursuance to Create Socio-economic Sustenance through Entrepreneurship Development'. It is headquartered at Coimbatore District, Tamil Nadu and pertinent information regarding activities is floated in its aforementioned official websites.

NFED primarily aims in creating enterprising communities at large in Schools, Colleges and Varsities through its training and development activities, faculty development programmes on research and entrepreneurship development, awareness, workshops, refereed conferences, seminars, etc. pertaining to Management Development, Research Emancipation, Technology Innovation and Entrepreneurship Development. It frequently engages in research and development activities by publishing research articles, book chapters and edited books on holistic research, which congregates the disciplines like, engineering, technology, sciences, management, arts and humanities and women development. It also recognizes the talents of teachers, academicians, researchers, professionals, entrepreneurs (including social entrepreneurs), practitioners, freelancers, etc. throughout the globe through its National Awards since 2010.

NFED encourages the entrepreneurial spirit of youths and facilitates them with opportunity guidance. Also, serves under a glocal perspective to bring in prosperity by and large to foster entrepreneurial progression amongst all communities in general and women in particular, across the nation. It has associated and collaborated with academia including, schools, colleges, varsities, etc. and also with national and international organizations. NFED has instituted numerous programmes hitherto towards promulgating entrepreneurship development, career development, employability skills, research publications, women empowerment, etc. Thus, to promulgate entrepreneurship development and research & development, the presidium of NFED has constituted two apex units on 7th November 2015 namely NFED Business Facilitators Forum (NBFF) – A Strategic Action Unit under NFED and Centre for Research & Training (CRT) – A Growth Action Unit under NFED respectively.

## Centre for Research & Training (CRT)

Centre for Research & Training (CRT) is a growth action unit under National Foundation for Entrepreneurship Development (NFED) initiated on 7th November 2015 with a goal to bring in quality research and promulgate enterprising faculties within the globe. CRT aims to bring in research and development climate through addressing mainstream aspects of research such as research structuring, research insights, publication process and publication strategies, thereby creating and nurturing research acumen within the aspirants across academia and industry. In addition to this, it also frequently engages in conducting Faculty Development Programmes (FDPs), Research Orientation Programmes (ROPs), Quality Publications (QPs) through infusing the importance of research and development. CRT has delivered more than 100 sessions and conducted numerous conferences, seminars, webinars, research workshops and faculty development programmes for understanding the new vistas in research and facilitating research career of academicians, scholars, practitioners, etc. at national and international levels.

## NFED Business Facilitators Forum (NBFF)

NFED Business Facilitators Forum (NBFF) is a strategic action unit under National Foundation for Entrepreneurship Development (NFED) initiated on 7th November 2015 with a goal to congregate entrepreneurs to create an entrepreneurial cult across the globe and foster entrepreneurship development process. NBFF aims to bring in an entrepreneurial climate through encouraging youths and interested individuals to vent into entrepreneurial activities by providing the platform for fulfilling their business aspirations. Furthermore, to act interfacing plank for enhancing their motivation and inclinations to become prosperous and potential entrepreneurs. In addition to this, it also insists on business growth through the concept of interdependence by creating channels and integrating entrepreneurial talents for collective existence, sustenance and survival. NBFF has delivered more than 100 sessions and conducted numerous national seminars & workshops, international and national webinars in entrepreneurship fundamentals & emerging trends, facilitating entrepreneurship development among teaching faculties and promulgating entrepreneurial acumen of students across the nation.

# NFED Trust Governing Board

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Associate Professor, Centre for Research & Training (CRT)

**Mr. N. R. Jaswin Kumar**
Youth Facilitator & Deputy Technical Head

# Conference Chair & Chief Patron

## KVJ. Prof. Dr. R. Ganesan

Karma Veer Jyoti. Professor Dr. R. Ganesan earned his doctorate from the reputed IIT Delhi with a special focus on Entrepreneurship Development. He possesses more than two decades of research experience in the field of entrepreneurship and management. He has served in different academia ranging from Deemed Varsities, Engineering Colleges, Arts & Science Colleges, B-Schools and International Varsities. He has more than 70 research contributions to his credit, which are published in refereed and indexed journals, books, book chapters, monographs and conferences. He is a global author in Women Entrepreneurship, whose research papers are listed in Google Scholar and indexed in ISI (AHCI & ESCI), MLA Citations, Scopus, EBSCO, Cabells' Directory, etc. He has authored two books on women entrepreneurship development and insurance management, which have been published at Germany and edited 23 edited books. He is serving as editorial member and reviewer for numerous journals and possesses more than 19 years of editorial experience. He has edited more than 640 research articles to his credit, which includes his editorial experience across refereed and indexed journals, conferences and book chapters at national and international levels. He has organized and hosted 3 refereed and indexed national conferences & 4 international conferences, 4 international seminars and conducted 44 faculty development programmes (FDPs). He has delivered national and international webinars focusing on Research & Development (Research Insights, Research Structuring, Publication Strategies, Statistical Insights, Crafting Literature Review and Publication Prospects), Entrepreneurship Development, Digital Marketing, etc. He has delivered more than 200 sessions on Research Insights, Research Structuring, Publication Strategies, Entrepreneurship Development, Managerial Skills, Career Development, Self-Management, Design Thinking, Employability Skills, etc. and inaugurated many Entrepreneurship Development Cells (EDCs) across the nation. Also, he has hosted 29 national award ceremonies for recognizing global talents. In commemorating his laudable academic, research and societal transformational services through upbringing entrepreneurship development he has been conferred with the prestigious title Karma Veer Jyoti (KVJ) by Indian Confederation of Non-Governmental Organizations (iCONGO), New Delhi, India on 22$^{nd}$ March 2015. He is the recipient of PFLA Excellence Award for his 'Outstanding Service to Education and Entrepreneurs' community from People First Leadership Academy (PFLA), Bengaluru, Karnataka on 19$^{th}$ January 2019. He has been conferred with 'Order of Eminence' the highest honour for his global contribution to

research, teaching and training in Entrepreneurship Development by the Presidium of NFED in its 10th National Teachers' Day Awards on 5th September 2019 at Coimbatore, Tamil Nadu. He has been conferred with the Prestigious MTC Global Distinguished Teacher Award in Entrepreneurship Development in the 9th World Edu Summit organized by Management Teachers Consortium (MTC) Global on 7th September 2019 at Bengaluru, Karnataka. He is the Founder Chairman & Presidium Chair of the renowned National Foundation for Entrepreneurship Development (NFED), Coimbatore, Tamil Nadu and Founder & Chair of NFED Business Facilitators Forum (NBFF) – A Strategic Action Unit and Centre for Research & Training (CRT) – A Growth Action Unit under the ambit of NFED. He is serving as the Board of Director (Chief Learning & Development Officer) and Chief Advisor, Talouns Pte Ltd., Singapore and Director, Unelma Solutions Pvt. Ltd. (USPL), Bengaluru, Karnataka. Also, he is serving as the Chief Advisor of iGen American Softwares Pvt. Ltd. (IASPL), Hyderabad, Telangana, Cynaris Solutions Pvt. Ltd. Bengaluru, Karnataka, (CSPL) and Unelma Solutions Pvt. Ltd. (USPL), Bengaluru, Karnataka.

# Conference Director & Patron

## Mrs. Ramya Kandavel

Mrs. Ramya Kandavel earned her Master's in Statistics from University of Madras, Chennai and Master's in Applied Psychology from Bharathiar University, Coimbatore. She holds a Diploma in Transactional Analysis from South Asian Association of Transactional Analysts (SAATA). She is a Psychological Counsellor and a Master practitioner in Neuro-Linguistic Programming. Her expertise as a counsellor includes Personal One-to-One Counselling, Stress Management, Psychotherapy and Dream Interpretation. She has published papers and book chapters in Edited Books. She commenced her professional career in the ITES Sector and possesses more than 16 years of administrative experience at various corporates and academic institutes. She joined as an active member in the renowned National Foundation for Entrepreneurship Development (NFED) and has facilitated its national events as Event Anchor, Programme Coordinator, Programme Director and Chief Coordinator. She has organized and hosted 3 refereed and indexed international conferences (including two web conferences), 17 national and international webinars and 8 faculty development programmes (FDPs) focusing on Research & Development (Research Insights, Research Structuring, Publication Strategies, Statistical Insights, Crafting Literature Review and Publication Prospects), Entrepreneurship Development, Digital Marketing, etc. at national and international levels. Also, she is the co-editor of Award Compendium of all NFED's national ceremonies since 2019. She is currently serving as the Executive Chairman and Director, wherein she oversees the entire administrative activities and also promulgates its social sensational programmes across the nation and globe.

## Conference Convener

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&
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Department of History
Sri G.V.G. Visalakshi College for Women (Autonomous)
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School of Education, SASTRA (Deemed University)
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Kavali, SPSR Nellore District, Andhra Pradesh

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Mahendergarh, Haryana

**Dr. Pooja More**
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Skill Development Centre
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**Dr. A. Krishnarathi**
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Unity College of Teacher Education
Dimapur, Nagaland

**Dr. G. Subhalakshmi**
Faculty
School of Law, Pondicherry University
Puducherry

**Dr. Kiran Joshi**
Assistant Professor
Department of Education
Modern College of Professional Studies
Ghaziabad, Uttar Pradesh

27-29 January 2022

## Keynote Speakers - Day I (27th January 2022)

**Dr. Patrick Osa. Oviasuyi**
Professor
Department of Public Administration
&
Deputy Vice Chancellor (Administration)
Academic Planning Unit
Ambrose Alli University, Ekpoma, Nigeria

**Dr. Araby Madbouly**
Associate Professor & Head
Department of Business & Accounting
Muscat College, Sultanate of Oman

**Mr. Nanda Kumar**
Founder & Director
Kovaion Consulting
London, United Kingdom

**Dr. Ratna Nashine**
Professor & Dean
College of Agriculture & Research Station
Kerlapal, Narayanpur, Chhattisgarh

**Dr. Garima Gupta**
Professor
Faculty of Management Studies
University of Delhi, Delhi

# Keynote Speakers - Day II (28th January 2022)

**Ms. Theviga Rani Wemel**
Co-Founder & Chief Operating Officer
LTT Global Communications Sdn Bhd, Selangor DE, Malaysia

**Dr. Jari Salo**
Professor & Head of Marketing Unit
Department of Economics & Management
University of Helsinki
&
Adjunct Professor - Digital Marketing
Aalto University School of Business, Finland

**Ms. Saeeda Ahmed**
Founding Director
Education Partnerships UK Ltd.
London, United Kingdom

**Dr. M. Chandrasekaran**
Professor & Dean (Academic Courses)
Vels Institute of Science, Technology & Advanced Studies
VISTAS (Deemed University),Chennai, Tamil Nadu

**Dr. Mary Cherian**
Professor & Head
KCT Business School, Kumaraguru College of Technology
Coimbatore, Tamil Nadu

**Dr. B. Surekha**
Professor
Department of Electronics & Communication Engineering
K.S. Institute of Technology, Bengaluru, Karnataka

# Keynote Speakers - Day III (29th January 2022)

**Dr. Nazrul Islam**
Pro-Vice Chancellor
&
Professor & Dean, Faculty of Business
Northern University Bangladesh, Banani, Dhaka, Bangladesh

**Dr. S. Anuzsiya**
Senior Lecturer in History, Grade I
&
Head, Department of Social Sciences, Faculty of Arts & Culture
South Eastern University of Sri Lanka, Oluvil, Sri Lanka

**Ms. Mireille Toulekima**
Founder & Managing Director
MT Energy Resources Ltd., Australia
&
Founder, STEM Queens, Uganda

**Dr. Gunita Arun Chandhok**
Professor & Principal
Saveetha College of Liberal Arts & Sciences
Saveetha Institute of Medical & Technical Sciences (Deemed University)
Chennai, Tamil Nadu

**Dr. Tattwamasi Paltasingh**
Professor & Head
PG Department of Sociology, Sambalpur University, Odisha

**Dr. Arti Chandani**
Associate Professor
Symbiosis Institute of Management Studies (SIMS), Pune, Maharashtra

# Valediction Keynote Speakers - Day III (29th January 2022)

**Prof. S. Magesh**
Chief Adviser
National Foundation for Entrepreneurship Development (NFED)
&
Chairman & Director
Magestic Technology Solutions Pvt. Ltd. (MTSPL)
Chennai, Tamil Nadu

**Dr. V. Sasirekha**
Professor
Sri Sai Ram Institute of Management Studies
Sri Sai Ram Engineering College
West Tambaram, Chennai, Tamil Nadu

**Dr. Reshmy Krishnan**
Associate Professor
Department of Computer Science & Engineering
&
Head of Research
Muscat College, Sultanate of Oman

**Mr. Owaiz Khan**
Co-Founder & Chief Product Officer
Talouns Pte Ltd., Singapore

# Session Chairs

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**Dr. P. Chitra**
Professor
Department of Information Technology
Meenakshi Sundararajan Engineering College
Chennai, Tamil Nadu

**Dr. Priti Srinivas Sajja**
Professor
PG Department of Computer Science
Sardar Patel University, Gujarat

**Dr. A. Uma Maheswari**
Associate Professor & Head
Department of Mathematics
Quaid-E-Millath Government College for Women (Autonomous)
Chennai, Tamil Nadu

**Dr. Naveen B P**
Associate Professor & Head
Department of Civil Engineering
School of Engineering & Technology
Amity University (Gurgaon Campus), Gurugram, Haryana

**Dr. V. Sunitha**
Associate Professor
Department of Geology
Yogi Vemana University, Kadapa, Andhra Pradesh

**Dr. V. Sailaja**
Assistant Professor
Department of Zoology
Vikrama Simhapuri University College
Kavali, SPSR Nellore District, Andhra Pradesh

**Dr. R. Deepalakshmi**
Assistant Professor
Department of Computer Applications
Tamil Nadu Dr. Ambedkar Law University, Chennai, Tamil Nadu

**Dr. S. Nageswari**
Assistant Professor
Department of Electrical & Electronics Engineering
Alagappa Chettiar Government College of Engineering & Technology
Karaikudi, Tamil Nadu

**Dr. Aruna M**
Assistant Professor
Department of Electrical & Electronics Engineering
Acharya Institute of Technology, Bengaluru, Karnataka

**Dr. K. S. Nivedhitha**
Assistant Professor
Centre for Research & Training (CRT)
National Foundation for Entrepreneurship Development (NFED)
Coimbatore, Tamil Nadu

**Ms. D. Susmitha**
Founder & Managing Director
Suntowa Technologies Pvt. Ltd.
Chennai, Tamil Nadu

## Track 2 - Management, Entrepreneurship & Innovation (MEI)

**Dr. V. Saikumari**
Professor & Head
Department of Management Studies
Easwari Engineering College, Chennai, Tamil Nadu

**Dr. J. Arthi**
Professor & Head
Department of Business Administration
Avinashilingam Institute for Home science & Higher Education for Women
Coimbatore, Tamil Nadu

**Dr. Subrata Chattopadhyay**
Professor
Department of Business Administration
University of Engineering & Management, Kolkata, West Bengal

**Dr. Esha Jain**
Associate Professor
University Institute of Tourism & Hospitality Management
Chandigarh University, Chandigarh

**Dr. Meghdoot Ghosh**
Associate Professor
IMS Business School, Kolkata, West Bengal

**Dr. N. Sarulatha**
Assistant Professor
Department of Business Administration
D.G. Vaishnav College (Autonomous), Chennai, Tamil Nadu

**Dr. A. Bharathy**
Assistant Professor
Department of Management Studies
Pondicherry University Community College
Lawspet, Puducherry

## Track 3 - Arts & Humanities (AHU)

**Dr. K. Vijaya**
Associate Professor & Head
Department of History & PG Studies
Quaid-E-Millath College for Women (Autonomous)
Chennai, Tamil Nadu

**Dr. R. Sarala**
Associate Professor
Institute of Health Management Research, Bengaluru, Karnataka

**Dr. Parvathy Menon**
Assistant Professor
Department of History & Politics
&
Dean (Student Affairs)
All Saints' College, Trivandrum, Kerala

**Lt. Dr. P. Karpagavalli**
Assistant Professor
Department of History
Sri G.V.G. Visalakshi College for Women (Autonomous)
Udumalpet, Tiruppur District, Tamil Nadu

**Dr. P. B. Beulahbel Bency**
Assistant Professor
Department of Education
Mother Teresa Women's University, Kodaikanal, Tamil Nadu

**Dr. Sheeba Khalid**
Assistant Professor - Sociology
Department of Legal Studies
The Neotia University, Kolkata, West Bengal

**Dr. Darishisha W. Thangkhiew**
Assistant Professor
Economics Department
School of Economics, Management & Information Sciences
North Eastern Hill University, Shillong, Meghalaya

**Captain. Dr. Kiran Lata Dangwal**
Assistant Professor
Department of Education
&
Associate Officer NCC
University of Lucknow, Uttar Pradesh

**Ms. Koyel Mallick**
Assistant Professor
Department of English
Heritage Institute of Technology, Kolkata, West Bengal

# Conference Excerpts

The three-day ICCRESMA 2022 has exhibited 21 Keynote Addresses delivered by Keynote Speakers from Finland, Singapore, United Kingdom, Australia, Malaysia, Oman, Bangladesh, Sri Lanka, Uganda and India. A total of 371 registered participants across 25 states and 3 union territories constituting 77.77% of India's academic participation in this international conference.

There are three main tracks in this international conference namely Science, Engineering & Technology (SET), Management, Innovation & Entrepreneurship (MEI) and Arts & Humanities (AHU). The are 14 streams under these following tracks:

1) Under SET Track the streams are Physics & Chemistry, Mathematics, Biology, IT & CSE, EEE & EEE, Civil Engineering and General Aspects, which included 68 presentations.

2) Under MEI Track the streams are Entrepreneurship Development, Marketing and OB & HR, which included 29 presentations.

3) Under Arts & Humanities the streams are Women's Studies, Education, Literature and History, which included 37 presentations.

There are 134 presentations across 19 parallel tracks through paper presentation sessions conducted and moderated by 33 session chairs, wherein 113 presentations have been completed till today. This shows 84.33% of paper presentations have been covered, which is a remarkable achievement and indomitable accomplishment of our three-day ICCRESMA 2022.

The research deliberations have provided all of us with adequate knowledge sharing and intellectual enlightenment. The keynotes by various national and international speakers have highlighted on Technology Innovation, Digital Transformation, Scientific Promulgation, Entrepreneurship Development, Research Structuring, Artificial

Intelligence, Design Thinking, Energy Management, Educational Transition, Business Promotion, etc.

I am sure the scientific inventions, technological innovations, management process, artistic approaches and humanistic views discussed in this ICCRESMA 2022 have been truly wisdomic and sensational.

This knowledge sharing platform paves the way for a holistic transformation in our research endeavours. Also, ICCRESMA 2022 has reinvigorated all of us to enrich our research insights and its promulgation through righteous research contributions towards achieving overall socio-economic growth and sustenance of our nation and globe.

My hearty congratulations to Conference Director & Patron, Mrs. Ramya Kandavel for successfully hosting this three-day ICCRESMA 2022.

My Best Wishes to all the keynote speakers, session chairs, conference conveners, organizing secretaries, organizing committee members, paper presenters and participations of this international conference.

Thank You

Sd/-
KVJ. Prof. Dr. R. Ganesan
Conference Chair & Chief Patron

# Paper Presentation Awards

## Track 1: Science, Engineering & Technology (SET)

**First Position: TR1-ICCRESMA2022-SET-54**

Antimicrobial Potential of Silver Nanoparticles Synthesized using Endophyitc Fungi Isolated from *Sargassum wightii* (Seaweed)
***Dr. Chandrashekhar G Joshi***

**Second Position: TR1-ICCRESMA2022-SET-09**

Evaluation of Mechanical, Thermal, Flammability and Electrical Properties of HDPE/ Carbon Composites under Low-Cost Interior of Building and Construction Material
***Ms. Mousam Choudhury***

**Third Position: TR1-ICCRESMA2022-SET-68**

Seasonal Variation of Morphology and Elemental Composition of Atmospheric Aerosols at Ballari in Southern India
***Dr. Shalini. V, Dr. Kuncham Narasimhulu & Dr. K. Rama Gopal***

## Track 2: Management, Entrepreneurship & Innovation (MEI)

**First Position: TR2-ICCRESMA2022-MEI-25**

Entrepreneurial Case Study - From Hobby to E-Business
***Dr. G. Padmini Devi & Ms. Sirisha Deepthi Sornapudi***

**Second Position: TR2-ICCRESMA2022-MEI-27**

An Analysis of Work life Over Quality of Work Life of an Entrepreneur
***Mr. Haresh Suthar & Dr. Mukesh Prajapati***

**Third Position: TR2-ICCRESMA2022-MEI-16**

Refugee Entrepreneurship: An Overview
***Ms. Nidhi Banthia Mehta***

**Track 3: Arts & Humanities (AHU)**

**First Position: TR3-ICCRESMA2022-AHU-21**

The Marginal Margin - A Conceptual View on Devadasis
***Dr. Suvashree Suvadarshinee***

**Second Position: TR3-ICCRESMA2022-AHU-37**

A Study on RTI Act and its Relevance to Media Organizations in Odisha
***Mr. Tikayat Nayak, Dr. Pravat Kumar Dash & Dr. Bandita Kumari Panda***

**Third Position: TR3-ICCRESMA2022-AHU-17**

An Empirical Investigation of Challenges Faced by Teachers towards Online Teaching During Covid-19
***Dr. Anuradha Sekhri***


# Conference Paper Abstracts

# A Study on Load Balancing Techniques and Optimized Layouts in Cloud Analytics

**Ms. R. Nathiya**
**Research Scholar**
Department of Information Technology
School of Computing Sciences
VISTAS, Chennai, Tamil Nadu, India

## Abstract

In cloud system, allocating or scheduling of user task is considered to be an NP-hard optimization problem. As per the cloud environment, tasks of every user are to denote balanced overload or underload of work. The process of task scheduling with the help of load balance might be done on independent or dependent work with virtual machines (VMs), which is considered to be a more important aspect. Load balancing is the technical process to detect and balance the loads of underloaded or overloaded nodes in the cloud task. On behalf of optimized data layout focusing on maximizing defined workload and dataset in the cloud environment. In the cloud-based data analytics services, the query processing is applicable for managing large data blocks from cloud storage. The effectiveness is highly based on how the records are assigned to blocks. An effective approach for optimizing data layouts targets a single table and performance affects using join based queries. Thus, to resolve the data layout issue, Make To Order (MTO) technique is used for optimizing the blocking strategy for all tables for query workload. There are some approaches on load balancing mechanisms in cloud computing in order to improve efficiency over various performance parameters. This study presents a detailed overview of load balancing and optimized layouts in cloud analytics.

E-ISBN: 978-81-954933-1-9

# Incorporation of Bovine Mastitis Detection Sensor in Automated Milking System

**Mr. Prajwal Anilkumar Parkhe**
**Student**
&
**Dr. Ankita Pagedar Singh**
**Assistant Professor**
Department of Food Processing Technology
A.D. Patel Institute of Technology, Anand, Gujarat, India

## Abstract

Bovine Mastitis (BM) is inflammation of udder due to infection or injury in the udder. It leads to bovine morbidity, mortality, and economic losses of approximately ₹9 Lakhs for a 500 cattle farm. BM is categorized as summer, environmental and contagious mastitis. The latter can be sub-categorized into sub-clinical, clinical and chronic BM. Unlike the clinical and Chronic BM, in case of sub-clinical BM, the cow does not display the characteristic symptoms like redness and inflammation of udder, blood in milk, etc. Nonetheless, the cow is contagious and can spread BM among other healthy cows of the farm. Thus, it is essential to identify the BM at early stage to reduce the cow morbidity and prevalence of large-scale BM in the farm. Conventionally, dairy farmers rely on cow-side tests like California Mastitis Test (CMT), Strip Based Test (SBT), Biomarkers Based Test (BBT), etc. Moreover, the Lab Based Test (LBT) are accurate, but requires resources like expertise and equipment. However, these tests cannot be done frequently as they are expensive, and labs may not be always in close vicinity of the farm. CMT is a popular cow side BM test, but the problem is it can be easily detected as false negative. Moreover, for a 500 cattle farm, it would cost ₹50000/- per month only to regularly monitor the BM. Thus, the present investigation was undertaken to develop a rapid method to detect BM for a large-scale dairy farm. The developed test would be rapid, considering multiple parameters to avoid false negatives, and minor modification would make it feasible towards its incorporation in automated milking system.

# Artificial Intelligence in Pharmaceutical Sales & Marketing – A Conceptual Overview

**Mr. Mrinmoy Roy**
**Assistant Professor**
Department of Pharmaceutical Management
Indian Institute of Health Management & Research
Bengaluru, Karnataka, India

## Abstract

Artificial Intelligence (AI) is a concept that describes how intelligent people think about an intelligent machine, a computer-controlled robot, or a piece of software. The advertisers will be able to switch from marketing personalization to super personalization or hyper customization with the aid of AI. Also, the marketers will be able to target individual doctors more precisely using AI, depending on geographical locations, number of patients, and prescribing patterns of doctors, as well as personal behaviour / interest / attitude. Many pharmaceutical companies participate in personal promotional activities such as rep visits, conferences, seminars, and webinars, while email and other digital media are mostly used for non-personal promotion. The sales and marketing teams will focus on finding the right healthcare professional and segmenting them into the right channel at the right time. AI will assist marketing teams in understanding brand history, running brand diagnostics, and charting the brand's future direction. In furtherance, AI could help sales teams with Customer Relationship Management (CRM), pre-call planning, guided sales, and e-details, resulting in a competitive advantage and improved sales outcomes. Overall, this will assist organizations in achieving better business outcomes with less resources and time respectively. Moreover, the interactions between reps and health care professionals (HCPs) may be the object of control. The power is now transmitted via variety of touch points, many of which are digital, and can be accessed by an HCP at any time and from any location. Thus, to increase their value the sales representatives are required to have comprehensive knowledge of the market and its customers, so that they can tailor their interactions to each of their specific needs, wherein it is all about the numbers. The sales force is more efficient and successful when data is gathered judiciously, correctly digested, easily analysed, and wisely used. These suggestions can be saved for later use in the voice assistant, or sent via text or email, and they can help to keep the flow of information in the office moving. AI-controlled ecosystems ensure that no critical data is lost. For instance, whether it is an open email, a website visit, a conversation with a rep, a script, or another job, the rep can quickly and easily find out what their HCP is worried with and what information is most important to their practice. It is by anticipating relevance, the rep will provide the HCP with information that is useful to them in the required format, on time, and exact place or location. In this process, the time is invested wisely on both sides, allowing the right expertise to help patients even more quickly. The business is robust, and it is only a matter of time before AI-based disruptions change the pharma marketing formulae, code and

momentum. It is to be noted that through actively engaging AI, Pharma and Life Sciences sector not only gain more useful information from data, but also draw previously inaccessible insights from it. Furthermore, it can help improve marketing strategies and helps patients stick to therapy care plans and make better choices. The future research shall focus on conversational AI as well as natural language processing and robot-based process automation, which will be the next big avenue in the pharmaceutical industry that are subjected to several disruptions.

E-ISBN: 978-81-954933-1-9

# A Study on Antioxidant and Hepatoprotective Activity of *Tinospora cordifolia* (Thunb.) Miers

**Dr. D. A. Shahira Banu**
**Assistant Professor**
Department of Botany
J.B.A.S. College for Women
Chennai, Tamil Nadu, India

## Abstract

The present research study analyzed the antioxidant activity and to evaluate the hepatoprotective activity of the leaf of *Tinospora cordifoli*a promising medicinal plant with great economic potential. The *Tinospora cordifolia* leaf (collected from Chennai, Tamil Nadu, India) were analyzed for qualitative and quantitative antioxidant activity of aqueous, ethanol, chloroform, petroleum ether and acetone extracts by using DPPH as free radical. The ethanol leaf's extract *Tinospora cordifolia* were evaluated for *in-vivo* hepatoprotective activity in animal rat model. Wister albino rats weighing 180-200 gm were used. The experimental liver damage was induced in rats by intraperitoneal administration of Carbon tetrachloride ($CCL_4$). The animals were divided in to five groups, each constituting six rats. One group of hepatotoxic rats were treated with standard drug silymarin 100 mg/kg/b.w./po and other two groups were treated with low and high dose of *Tinospora cordifolia* ethanol leaf extract. The above-mentioned treatment schedule was followed for the respective group animals for 10 days. At the end of the experimental period animals were sacrificed by cervical decapitation. The blood was collected and serum was separated to estimate the function of liver marker enzymes such as Alanine Amino Transaminase (ALT), Aspartate Amino Transaminase (AST), Alkaline Phosphatase (ALP), Acid Phosphatase (ACP) and total bilirubin. The ethanol leaf extracts of *Tinospora cordifolia* recorded higher percentage of free radical scavenging activity than aqueous followed by acetone, petroleum ether and chloroform. The ethanol leaf extract of *Tinospora cordifolia* with low and high dose showed significant hepatoprotective efficiencyin $CCL_4$ induced hepatocellular jaundice in experimental model rats and the results were comparable with the standard drug silymarin. *Tinospora cordifolia* ethanol leaf extract showed maximum antioxidant activity both qualitatively and quantitatively. The ethanol leaf extract of *Tinospora cordifolia* showed significant hepatoprotective activity. The berberine compound present in the ethanol leaf extract of *Tinospora cordifolia* controls the $CCL_4$ induced hepatocellular jaundice. The future studies have to determine the effect of *Tinospora cordifolia* ethanol leaf extract on antioxidant enzymes by *in-vivo* studies for validating the traditional values.

E-ISBN: 978-81-954933-1-9

# A Study on Effective Mathematical Approach in Computer Science

**Dr. Varsha D. Chapke**
**Assistant Professor**
Smt. Shobhatai Bansod Arts, Commerce & Science College
Chandrapur District, Maharashtra, India

## Abstract

The mathematics subject for PC technology teaches college students the way to use summary language, paintings with algorithms, self-examine their computational thinking, and appropriately modeling real-global solutions. Moreover, the continuous arithmetic is a vital basis for many engineering and technology disciplines. Similarly, discrete arithmetic and common sense are the foundations for computers, i.e., PC technology. The reason being, computer's foundation primarily includes computer technology, software program engineering and statistical systems. However, these aforementioned critical foundations are taught regularly and applicable in accordance with connections to computing, which are required to inspire the arithmetic and are generally now no longer made. The mathematics is an herbal complementary area for learning, information and appreciating many essential PC technology concepts. It is to be noted that for the scholars' benefit, foundational arithmetic ought to be added early and included throughout the duration of course curriculum. This in turn offers a constant motivation, precise and trendy guidelines, curriculum systems and consultant first route towards appreciably improving the mathematical reasoning abilities of PC technology and software program for engineering graduates. It is over the past two decades, coaching foundational computing, speaking to and surveying college students, alumni, educators and company human beings have addressed the requirements, wherein the graduates of mathematically orientated packages may be higher trendy hassle solvers and software program practitioners. The present research discusses about the approach of mathematics in computer science and programs.

# Footstep Force as Power Generation Source for Street Light – A Methodical Approach

**Ms. Sabitha. S**
**IV Year B.E.**
&
**Ms. Vishali. M**
**IV Year B.E.**
&
**Ms. Vishnu Priya. S**
**IV Year B.E.**
&
**Dr. A. N. Jayanthi**
**Associate Professor**
Department of Electronics & Communication Engineering
Sri Ramakrishna Institute of Technology
Coimbatore, Tamil Nadu, India

## Abstract

Footstep force can be one of the energy sources to power street lights. The primary aim of present research is to provide a framework for gaining the electrical energy through pressure generated by footsteps. Once a person walks on the pathway, the footsteps trigger the microcontroller and the pressure generated through this device is regenerated into power. This energy is stored in the battery, wherein the electricity produced by this technique can be utilized for street lights. Moreover, this type of device keeps the road light active automatically throughout the whole night without human effort. This can be done through setting ON and OFF mechanism in Real-Time Clock (RTC). The advantage of using this type of energy generation is that it does not waste the alternative resources. The development of footstep device will be highly useful on busy areas like railway station, airports, bus terminus, supermarkets, malls, etc., where the frequency of pedestrians is more in number.

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# Integrated Approach for Evaluation of Groundwater Quality through Hydrogeochemistry of Groundwater from Hard Rock Aquifer, Andhra Pradesh, India – An Analytical Study

**Dr. V. Sunitha**
**Associate Professor**
Department of Geology
Yogi Vemana University
Kadapa, Andhra Pradesh, India

## Abstract

In the world's arid and semi-arid regions, the groundwater becomes an important source of fresh water for drinking and agriculture, wherein the quality is indispensable. Hence, in order to examine the drinking water quality, hundreds of groundwater samples have been collected in portions of hard rock terrains in Andhra Pradesh, India, before and after the monsoon seasons. During the pre-monsoon and post-monsoon seasons, Pollution Index of Groundwater (PIG) values of groundwater samples varied from 0.95-1.53 and 0.83-1.28, respectively. Also, when comparing the pre-monsoon and post-monsoon seasons, PIG values are slightly higher in the pre-monsoon season. In furtherance, the pre-monsoon season, 96 percent of groundwater samples had an insignificant pollution class (1) and only 4% had a low pollution class (2) ranging from 1-1.5. The insignificant pollution status (1) has been found in 82 percent of groundwater samples, whereas low pollution (1-1.5) was found in 18 percent of groundwater samples during the post-monsoon season. Also, during these aforementioned seasons, Water Quality Index (WQI) values of groundwater samples ranged from 108.5-204 mg/L and 112.6-170 mg/L respectively, which indicated that 100 percent of the samples are unfit for human consumption. The piper diagram clearly reveals that groundwater is majorly mixed with $Ca^{2+}$-$Mg^{2+}$-$Cl^{-}$, $Ca^{2+}$-$Mg^{2+}$-$Cl^{-}$-$SO_4^{2-}$, $Na^{+}$-$K^{+}$-$Cl^{-}$- $SO_4^{2-}$ types in the region. The Gibbs plot indicates that groundwater samples fall within the field of rock dominance, which showed that groundwater samples are in the rock dominance field. The main sources to fluoride release in groundwater includes rock weathering and dissolution of fluoride-bearing minerals from the source rock. Moreover, the agricultural fertilizers may have contributed to the excessive fluoride in the groundwater. The chemical fertilizers and waste disposal leaching have contributed to higher nitrate levels in groundwater tests. The spatial distribution of groundwater quality examination using Graphic Information System (GIS) methodologies reveals that the majority of groundwater samples do not meet drinking water quality requirements, and water must be treated prior to use. Thus, the present study provides an integrated approach for evaluation of groundwater quality through examining the PIG values and WQI values of groundwater from hard rock aquifer.

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# Electronic Structural Calculations of Noble Metal Halides α-AgX (X = Cl, Br and I): A DFT Study

**Mr. Sahab Uddin Mazumder**
**Research Scholar**
&
**Dr. Y. Sundarayya**
**Assistant Professor**
Department of Physics
Nagaland University, Nagaland, India

## Abstract

The study reports about electronic structure calculations of super-ionic conducting noble metal halides, α-MX (M = Ag, X = Cl, Br and I) that crystallizes into face cantered cubic (fcc) structure with rock-salt phase. The energy bandgap of α-silver halides differs due to the splitting of 4d of Ag and np of X in the dispersed band structure. The electronic structure of α-AgX has been investigated using Vienna Ab-initio Simulation Package (VASP code) by taking a plane-wave basis with projected augmented wave (PAW) potentials. The calculations are performed based on density functional theory (DFT) with generalized gradient approximation (GGA) as exchange correlation parameter. The energy convergence has been achieved by adopting 6×6×6 k- mesh generated by Monkhorst-Pack method. The observations of bandgap values for α-AgCl, α-AgBr and α-AgI are 0.93eV and 0.7eV and 0.7eV respectively, which correlates with the rock-salt phase of silver halides. These compounds are further analyzed by density of states (DOS) to investigate the ionic conducting property. The results revealed on structural parameters and energy gap are in good agreement with the literature.

E-ISBN: 978-81-954933-1-9

# An Analytical Study on $CH_4$ Flux from Three Feeder Streams of Loktak Lake in Eastern Himalayas

**Dr. Raju Singh Khoiyangbam**
**Assistant Professor**
Department of Forestry & Environmental Science
Manipur University
Imphal, Manipur, India

## Abstract

The Loktak Lake is the largest natural freshwater lake in India located at Moirang, Manipur. It is primarily fed by ten feeder streams that originate in the adjacent mountain ranges of Eastern Himalays. The Nambol, Thongjaorok and Ningthoukhong Turels are important streams discharging into Loktak. Moreover, the $CH_4$ flux measurement has been carried out using the closed chamber technique (Hutchinson & Moiser, 1981). The gas samples were analyzed using a gas chromatograph (Shimadzu, GC-8A). The $CH_4$ flux was calculated following the equation given by Debnath et al. (1996). Also, $CH_4$ flux from streams showed both spatial (upstream, town and downstream) and temporal variation (seasonal, pre-monsoon, monsoon and winter). Furthermore, the $CH_4$ flux has been recorded, wherein it was consistently higher in the section of the stream meandering through the town compared to the upstream and downstream. The recorded mean $CH_4$ flux in the stream in the town during the pre-monsoon was 249.6 ± 18.7 mg $m^{-2}$ $d^{-1}$, 172.6 ± 15.5 mg $m^{-2}$ $d^{-1}$ and 203.9 ± 17.8 mg $m^{-2}$ $d^{-1}$ for Nambol, Thongjaorok and Ningthoukhong Turels respectively. The mean $CH_4$ flux in the downstream during the same period in these three streams have been recorded as 179.9 ± 18.8; 142.7 ± 11.2 and 158.9 ± 10.8 mg $m^{-2}$ $d^{-1}$ respectively. In addition to this, the $CH_4$ emission rates from these streams have been recorded as highest during pre-monsoon and minimal during the winter. The mean $CH_4$ flux during pre-monsoon for the stream in the town was 249.6 ± 18.7 mg $m^{-2}$ $d^{-1}$ (Nambol Turel); 172.6 ± 15.5 mg $m^{-2}$ $d^{-1}$ (Thongjaorok Turel) and 203.9 ± 17.8 mg $m^{-2}$ $d^{-1}$ (Ningthoukhong Turel). The respective mean flux of $CH_4$ are calculated for these three Turels as 13.9 ± 1.4 mg $m^{-2}$ $d^{-1}$, 13.5 ± 1.1 mg $m^{-2}$ $d^{-1}$ and 13.1 ± 1.4 mg $m^{-2}$ $d^{-1}$ during winter. The seasonal difference in $CH_4$ flux was statistically significant (ANOVA, $P = < 0.05$) for all the stream sections and in all the three streams. Thus, from the results, it can be concluded that: (i) the feeder streams, like many other wetlands, are perpetual sources of atmospheric $CH_4$, and (ii) the section of streams in the urban areas are the hotspot for $CH_4$ emission. In furtherance, the proper treatment and management of solid and liquid wastes in the urban catchment may be considered as mitigation measures for $CH_4$ emission from these wetlands.

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# Evaluation of Physico-Chemical, Microbial and Sensory Attributes of Minimally Processed Litchi (Litchi chinensis Sonn.) Under Low Temperature Storage – An Experimental Study

**Dr. Pushpendra Kumar**
**Assistant Professor**
Department of Post-Harvest Management
College of Horticulture & Forestry
Central Agricultural University
Pasighat, Arunachal Pradesh, India

## Abstract

The study attempts to report the efficacies of seven different anti-browning compounds at various concentrations namely methionine (0.1%), cysteine (0.1%), EDTA (0.1%), oxaloacetic acid (1%), ascorbic acid (1%), citric acid (1%), and KMS (0.5%) on quality and shelf-life extension of minimally processed litchi aril. The treated litchi aril kept in trays is wrapped with plastic film and stored under refrigerated conditions. The changes in total soluble solids, titratable acidity, ascorbic acid, total phenolics, sensory attributes, colour, weight loss, microbial and activities of polyphenol oxidase and peroxidase enzymes are evaluated. It is to be noted that treatments reduce the weight loss and sensory attributes with higher contents of TSS, titratable acidity, ascorbic acid, total phenolics and suppressed the increase in activities of polyphenol oxidase and peroxidase. Therefore, a post-harvest dip of peeled litchi into solutions of chemical preservatives could be suggested to maintain the post-harvest quality under refrigeration storage. The treated litchi arils are acceptable (sensory score >7) up to 8 days as compared to 3 days for the control samples during refrigerated storage. Furthermore, 1% ascorbic acid and 1% citric acid have been recorded to be the best to preserve the quality of minimally processed 'Mujaffarpur' litchi during refrigeration storage.

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# A Study on Lignin Supported Palladium and Nickel Nanoparticles (Lignin-Pd/Ni-NPs) for Catalytic Applications in Organic Synthesis

**Dr. P. Raghavendra Kumar**
**Assistant Professor**
Department of Studies & Research in Chemistry
University College of Science, Tumkur University
&
**Dr. M. B. Marulasiddeshwara**
**Guest Faculty**
Department of Studies & Research in Organic Chemistry
Tumkur University
Tumkur, Karnataka, India

## Abstract

The supportive metal nanoparticles (M-NPs) have been playing important roles mainly in metal catalyzed organic transformations, biological activity and material science. Recently, M-NPs supported by biopolymers (biopolymer@M-NPs). For instance, lignin, cellulose, starch, arabinose, arabinogalactan, pectin, lingo-cellulose etc., have reported to exhibit interesting biological properties, but also excellent heterogeneous catalysts in organic synthesis. The reason being biopolymers are naturally abundant, renewable, biodegradable, eco-friendly, non-toxic, bear various organo-ligating functional groups to stabilize both metal ions and M-NPs by coordination and chelation. The advantages of these catalysts are due to its ease of separation and recyclable nature. Currently, the M-NPs stabilized by 'lignin' have been found very attractive because it is fascinating and highly suitable for stabilization as it is more abundant, cheap, wood-based and sustainable material. Also, it contains multi-ligating organo-functionalities such as aryl, alkenyl, alcoholic, phenolic, carboxylic, carbonyl and ethereal and spread in three-dimensions (3D). Hence, the research study has attempted to present the synthesis and applications of lignin-stabilized Pd-NPs and Ni-NPs in catalysis.

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# Optimization of Parameters for Kombucha Production and its Sensorial Analysis

**Dr. Priya Katyal**
**Microbiologist**
Department of Microbiology, College of Basic Sciences and Humanities
Punjab Agricultural University
Ludhiana, Punjab, India

## Abstract

The market of functional beverages is considered to be spreading rapidly in the market after the increased popularity of "Functional Foods". Functional beverages are the drinks either non-alcoholic or have alcohol content below 0.5% containing non-traditional ingredients such as minerals, vitamins, amino acids, dietary fibers (DFs), probiotics, added raw fruits, etc. Also, it is considered to be the most effective active sector among functional foods because of their ease of product formulations, distribution, refrigeration and possibility to meet consumer demands. The tea (*Camellia sinensis*) is the most commonly used and well accepted beverage throughout the world because of its claimed health benefits. Tea is a rich source of biologically active compounds such as polyphenols and polysachharides. Moreover, tea polysaccharides have shown glycosidal inhibitory, antibacterial, antioxidants and immune-modulatory properties. Although tea is widely used as a beverage, but its fermentation to produce a functional beverage like Kombucha is not well exploited in India. Despite the rapid growth and increasing trend of functional beverages in the market of developed countries, the information on black tea based functional beverages is meager in India. Hence, the present research work highlights the production optimization of black tea based functional beverage (Kombucha) using symbiotic culture of bacteria and yeast and also to evaluate the physiochemical, microbial and sensory parameters of developed functional beverage.

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# A Review on Linear Algebra of Neural Networks

**Ms. Jyoti Tiwari**
**III Year B.Sc. (Hons)**
&
**Ms. Shruti Mittal**
**III Year B.Sc. (Hons)**
&
**Ms. Mitali Mittal**
**III Year B.Sc. (Hons)**
&
**Dr. Ritika Chopra**
**Assistant Professor**
Department of Mathematics
Shaheed Rajguru College of Applied Sciences for Women
New Delhi, India

## Abstract

In the era of deep learning and Artificial Intelligence (AI), neural networks are restructuring the business and technology. Neural networks are designed to function as neurons operate in the human brain to learn, recognize, predict and solve problems arising in all AI enabled sectors. The most revolutionary aspect of neural networks is supervised learning. Elementarily neural networks are algorithms that have the ability to extract meaningful data and act accordingly. There is a significant amount of algebra and other mathematical concepts that are used to design neural networks. The mathematical perspective makes neural networks fundamentally understandable. Moreover, neural networks are computationally exhaustive, but linear algebra makes it efficient. This research reviews the different aspects of algebra used in neural networks. Also, the study is broadly classified into algebra used in neural networks, neural networks, designing of single and multi-layer neural networks and application of neural network in cancer detection problem through appropriate illustrations.

# Study of Structural and Morphological Properties of Polypyrrole and PVA Composite Films on the basis of Molar Ratio

**Ms. Niyanta V Dave**
**Research Scholar**
Department of Physics
Shri Jagdishprasad Jhabarmal Tibrewala University
Churela, Rajasthan, India
&
**Dr. Dattatray M. Nerkar**
**Professor**
Department of Physics
Sathaye College (Autonomous)
Mumbai, Maharashtra, India

## Abstract

Pyrrole is synthesized using chemical oxidation with ferric chloride as an oxidant to form Polypyrrole (PPy). Several chemical oxidations have been accomplished with different Molar ratio (oxidants to monomer). Polyvinyl Alcohol stocksolution was prepared. The composites of PPy and PVA have been formed using solution casting techniques to obtain free standing films. These films are then identified using Surface Imaging Method (SEM), Fourier-Transform Infrared Spectroscopy (FTIR) and X-Ray Powder Diffraction (XRD) techniques. This gives an idea about surface morphology and structural analysis of the films and how it varies with the Molar ratio. Also, the conductivity of this composite has been studied at different temperatures.

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# Ranking Fuzzy Numbers Based on Angles of Reference Functions – A Mathematical Approach

**Ms. Anjana Sinha**
**Research Scholar**
&
**Dr. Shiv Prasad**
**Assistant Professor**
Department of Mathematics
Binod Bihari Mahto Koyalanchal University
Dhanbad, Jharkhand, India

## Abstract

The fuzzy idea is quite prevalent and contains a lot of information. Moreover, due to the large applications of fuzzy numbers in many applied models like linguistic decision-making and risk analysis, their ranking is quite important. A lot of methods have been proposed for ranking fuzzy numbers. These include methods based on distance, area, centroid point, weighted mean, minimizing and maximizing sets. However, no method can be acknowledged in every situation, wherein some are indiscriminating and counterintuitive. This study presents a mathematical approach for ranking fuzzy numbers based on the angles of left-right membership functions (reference functions) with the horizontal. This method is independent of normality of the membership functions of fuzzy number. The proposed approach is illustrated through several numerical examples that exist in the literature. Furthermore, the results are compared with some existing ordering procedures to check its consistency and to validate the advantage.

# New Biotechnological Approaches to Enhance Salt Tolerant Traits in Pigeon Pea (*Cajanus cajan*) – An Overview

**Ms. Neha Sharma**
**PhD Research Scholar**
&
**Mr. Amit Kumar**
**Assistant Professor**
&
**Ms. Reshu Chaudhary**
**Assistant Professor**
Department of Biotechnology
Keral Verma Subharti College of Science
Swami Vivekanand Subharti University
Meerut, Uttar Pradesh, India

## Abstract

According to Indian Institute of Pulses Research document, India's population is expected to touch 168 billion by 2030. In furtherance, pulses requirement for the year 2030 is projected at 32 million tones with anticipated annual growth rate of 4.2%. The Pigeon pea is an important legume crop cultivated throughout the tropical and subtropical areas. It is cultivated in India, Malaysia, Indonesia, Philippines, Caribbean, East and West Africa. In Northern India it is commonly known as Arhar, this protein rich pulse crop has a growing demand in Asia. Moreover, among the pulses, pigeon pea is the second most important kharif grain legume after chickpea in India. It is to be noted that due to various stresses, Pigeon pea [*Cajanus cajan* (L.) Millsp.] in India has achieved only a growth rate of 0.8% in production between the years 1949 to 2004. Recently, appropriate management technologies have emerged to counteract the abiotic stresses like salinity, drought and water logging. The *Cajanus cajan* productivity in its selected cropping system can be enhanced by integrated plant nutrient management system. This in turn reduces the abiotic stress and increases soil fertility. The present study focuses on the aspects of pigeon pea cultivation through new biotechnological approaches. Also, suggests fostering its production through effective procurement and enhanced productivity aid with attractive minimum support price to encourage agriculturists.

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# Outcome Based Education (OBE) in Mechanical Engineering – An Overview on Competencies, Attitudes & Values Required by Industry

**Mr. K. Hemaprasad**
**Head**
Department of Mechanical Engineering
T. S. Srinivasan Centre for Polytechnic College & Advanced Training
Vanagaram, Chennai, Tamil Nadu, India

## Abstract

Today, the dynamic economic scenario has embraced technological innovations to focus upon the cost-effectiveness alongside quality, wherein the industries are under great competition. The reason being it has enhanced players from different strata of industries. This necessitated the quality-centric products. Thus, the quality product at low cost is the prime requirement for industrial sustenance in the market. Therefore, there are great expectations from passing out new diploma engineers. This leads to continuously revisiting the education system, which can meet the current requirements of the industries. Therefore, engineering curriculum is continuously improving its framework wherever further modifications are required to achieve total results. In this context, curriculum design for mechanical engineering at diploma level must be based on sound educational principles for giving the students with required exposure to solve the real-world problems and emerge as quality outputs from institutions. This also incorporates the expectations of stake holders from students after completing the diploma course in Mechanical Engineering. Moreover, for outcome Based Education (OBE) to be a success in true measures, both the students and faculty must understand that higher education is not a unilateral mode, wherein the textbook language is the only form and way of learning. Education in tertiary institutions should be more engaging and bilateral, whereas students develop the understanding on their own. Curriculum design plays a vital role in achieving such results. This research study presents the overview of expectations of industries from young diploma engineers and methods followed for OBE based curriculum design with a case study for a course from Mechanical Engineering Diploma program. The study suggests that same procedures may be followed for other courses and structured in the curriculum. Also, both direct and indirect assessment methods have been taken to measure the level of program outcome (PO) attainment and success level of its curriculum design.

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# Vermicomposting an Effective Alternate for Solid Waste Pollution by Soiled Sanitary Napkins – An Experimental Approach

**Dr. Aliva Patnaik**
**Assistant Professor**
School of Life Sciences
Sambalpur University
Burla, Odisha, India

## Abstract

The sanitary napkins used by women of reproductive age in India each year would give rise to a mind-boggling amount of 58,500 million used napkins. These soiled sanitary napkins are subjected to landfills or dumped in open at dumpsites, which is the usual practice, and it creates serious solid waste problem. However, vermicomposting of these soiled wastes is one of the better alternatives for prevention of solid waste pollution. The used sanitary napkins are subjected to composting and vermicomposting. The present research study studied soil enzyme activity (protease urease, amylase and cellulose) through set of experiments at 20 days interval. The highest protease activity has been observed in Group D (vermicomposting sets with Cow Dung amendment) (354.356 µg/g/hr). The two-way ANOVA showed significant difference ($p < 0.001$) between the treatment as well as duration. It is by $20^{th}$ day the amylase and urease activity increased by 2.17 and 5.8 times respectively in the vermicomposting sets when compared to composting. Also, the cellulose activity has increased by 3 times in vermicomposting sets when compared to composting sets on $20^{th}$ day of experiment. The statistical analysis has showed significant difference ($p > 0.001$) with respect to treatment and duration. The highest enzymatic activity has been found in vermicomposting sets as compared to composting sets. The enzymatic activities can be considered as indicator of biological stability of organic waste. Hence, decomposition of this solid waste (soiled sanitary napkins) by vermicomposting leads to enhancement in rate of decomposition process along with nutrient enrichment of soil ultimately leading to increase in soil fertility.

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# A Report on Biodiversity of Butterflies (Lepidoptera: Rhopalocera) in Gutuwa, Ranchi District, Jharkhand

**Ms. Kiran Kumari**
**Research Scholar**
Department of Zoology
Ranchi University
Ranchi, Jharkhand, India

## Abstract

Butterflies are the most tempting insects due to their charismatic colours and appearance. They are the important components of food chain and food web respectively. The species of butterflies (Lepidoptera: Rhopalocera) can act as pollinators as well as pests in the horticulture and agriculture sectors. In this context, one can say that they have a great aesthetic, ecological as well as economic value. Hence, it is very important to conserve them. The present study has been an attempt to explore the biodiversity of butterflies in the Gutuwa within Ranchi District of Jharkhand State, India. The study has been conducted between January to December months in 2020. The sample was taken from 7:00 am to 10:00 am in the once in 15 days repetitively. A total of 235 butterflies out of 18 species belonging to families Nymphalidae, Pieridae and Papilionidae together with their host plants have been included and reported in this study. The Nymphalidae species has been recorded as the dominant family with nine species followed by Pieridae with five species followed by Papilionidae with four species respectively. The value of Shannon Weiner Index (H) is recorded as 2.86; 0.99 has been the calculated value of Evenness Index (J) regarding Biodiversity of butterflies, 0.05 is the value of Simpson's Index (D) and 0.94 is the value of Simpsons Diversity Index (1-D) for Butterfly population in the Gutuwa of Ranchi. These above-mentioned values show good biodiversity of butterflies that existed in the study area. This research study might be helpful to develop a strategy towards biodiversity conservation.

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# Exploitation of Allelochemicals in Improving Crop Productivity – An Overview

**Ms. Reema Teotia**
**Research Scholar**
&
**Ms. Shefali Poonia**
**Research Scholar**
Department of Botany
D.N. Degree College
Meerut, Uttar Pradesh, India

## Abstract

During the recent past, the importance of allelopathy in nature as well as in agroecosystems has attracted worldwide attention. In the beginning, allelopathic studies were limited to the effect of one plant on the other, without much knowledge about the chemicals responsible for such effects. Later, by active involvement of scientists belonging to various disciplines, made allelopathy a multidisciplinary subject. Subsequently, several allelochemicals, which are at the helm of the entire allelopathic affair have been isolated, identified and their effects are studied not only on germination, growth or metabolism but also at the molecular level. These developments slowly transformed allelopathic research from basic to applied, and numerous ideas are floated to exploit allelopathy/allelochemicals in various ways in agriculture and forestry. The plants synthesize allelochemicals, which possess a wide range of biological activities leading to diverse types of interactions with plants and microorganisms. These interactions include largely a negative effect on germination, growth, development, distribution and behaviour of other organisms. Such interactions may thus lead to recognition and utilization i.e., synthesis, chemically directed selection, gene insertion of new molecules designed to attack a particular plant or organism from a plant protection viewpoint. The present study attempts to exploit the aspects with regard to utilization of allelochemicals for improving the crop productivity.

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# Analytical Study on Impact of Neem Oil on *Heteropneustes fossilis* exposed to Petrochemical Effluent

**Dr. Amthul Azeez**
**Vice Principal and Associate Professor & Head**
&
**Ms. C M Lubna Ghazia**
**PhD Research Scholar**
Postgraduate and Research Department of Zoology
Justice Basheer Ahmed Sayeed College for Women (Autonomous)
Chennai, Tamil Nadu, India

## Abstract

The petrochemical refineries release a huge amount of waste and complex set of oxygen demanding compounds into the aquatic environments. Neem oil extracted from the seed kernels of *Azadirachta indica* (A.Juss) is known for its biological and pharmaceutical properties. The objective of this research is to study the effect of neem oil on Catfish *Heteropneustes fossilis* exposed to petrochemical effluent. The physico-chemical parameters of the effluent have been analyzed and alongside, the biochemical and hematological parameters are studied in the Catfish when exposed to the petrochemical effluents and neem oil separately and synergistically. The bioassay for petrochemical effluent and neem oil has been performed, wherein $LC_{50}$ value is calculated and based on following methods: Group I: control, Group II: fishes with 6% petrochemical effluent, Group III: fishes with 12% petrochemical effluent, Group IV: fishes with 2% neem oil, Group V: fishes with 2% neem oil, 6% petrochemical effluent and Group VI: fishes with 4% neem oil and 12% petrochemical effluent. The results of physico-chemical analysis of the petrochemical effluent have showed significant quantities of TSS (230 mg/l), TDS (2780mg/ml), Calcium (104mg/l), Sodium (650 mg/l), Potassium (40mg/l), Sulphate (385 mg/l) and Chloride (1148 mg/l), while other parameters such as Total Hardness (450 mg/l) and COD (62 mg/l) are under permissible limits. The results for biochemical analysis of carbohydrates and protein in the gills, muscle and liver of the catfish has been found to be significant at $P < 0.001$. The hemoglobin and total RBC count content was significantly higher in group IV fishes, while the total WBC count and PCV count have been found to be higher in Group I fishes. The present study showed significant biodegradation of petroleum effluent when used in synergy with neem oil and its efficacy indicates sustainable method for treatment of petrochemical effluent.

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# Comparative In-Vitro Anti-Inflammatory Activity of Serine Protease Inhibitor from *Cassia siamea* and *Dolichos biflorus*

**Mr. Sachin H R**
**Research Scholar**
&
**Mr. Prabhudev S H**
**Research Scholar**
&
**Dr. Sneha Rani A H**
**Assistant Professor**
Department of Studies and Research in Biochemistry
Mangalore University, Jnana Kaveri PG Center
Chikka Aluvara, Karnataka, India

## Abstract

The inhibitors of proteases (proteinases) are widely distributed in plant families like Fabaceae, Asteraceae and Cucurbitaceae. Moreover, protease inhibitors are common in nature having protective and regulatory function. Proteinaceous inhibitors are particularly abundant in storage tissue such as seeds and tubers. In seeds, protease inhibitors play a role in powerful defence mechanism in protecting seeds from infestation against predatory herbivorous insects and nematodes. *Cassia siamea* plant is a non-edible plant belongs to the family fabaceae. The seed of *Cassia siamea* contains 16% of protein. The present research study reports the biochemical characterization of a unique serine protease inhibitor from seeds of *Cassia siamea* and assessed the anti-inflammatory activities of isolated inhibitor. The purified serine protease inhibitor has been obtained by subjecting the seed extract to ammonium sulphate precipitation followed by fast performance liquid chromatography (FPLC)-anion exchange chromatography and affinity-chromatography. Approximately 35-fold purification with the specific activity of 250 U/mg of trypsin inhibitory unit (TIU) has been obtained. The characterization of protease inhibitor for optimum temperature, pH, and metal ions are measured using N-α-benzoyl-DL-arginine-p-nitroanilide (BAPNA) assay and casein zymogram. The *Cassia siamea* trypsin inhibitor (CsTI) has a relative molecular mass of 25.5 kDa. Purified CsTI and *Dolichos biflorus* were tested for anti-inflammatory efficacy against A549 and RAW 264.7 cell lines. In comparison to *Dolichos biflorus*, CsTI has the most effective anti-inflammatory effects.

# Migrating from Traditional Agile Software Development to Cloud-Based Agile Software Development: A Case Study

**Ms. Pooja S. Bidye**
**Assistant Professor**
Department of Computer Science
Dnyanprassarak Mandal's College & Research Centre
Assagao, Goa, India

## Abstract

The agile software development stresses on rapid, iterative, feedback-based software development thus emphasizing on the quality product delivery. Cloud computing ensures that the data can be accessed in distributed manner, which is well protected and allows working in a collaborative environment. The case study compares the efforts required for development, using Agile Methodologies in a local and a distributed environment using the cloud-based methodologies and tools. In furtherance, the two modules of Library Management System (LMS), with equivalent complexity, have been developed using the Agile methodologies, first in local environment and then in simple cloud-based distributed environment and using tools for development like GitHub, Selenium, Trello, Google-Based services. A group of three undergraduate computer science students have been asked to develop two modules of LMS using Agile methodologies. Also, before conducting the case study, students are trained using the tools required for this case study. The story points of user stories, which are used as a basis of comparing the efforts required for developing the two modules. Furthermore, the efforts measured in terms of number of hours for each phase of development, showed that the agile methodologies in the cloud-based environment with the use of software tools for working in collaborative environment show better performance. The burndown charts drawn also showed that cloud-based agile methods adhere better to the schedule estimated during the planning phase. The collaborative working has been enhanced in cloud-based environment. Moreover, there has been a paradigm shift in the collaborative working environment due to pandemic. The study reinforces the fact that agile methodologies in a cloud-based environment with the use of software tools that can make working on software development effective, rapid and on schedule.

# Synthesis of Ligand Metal Complexes as Novel Antimicrobial Strategy

**Ms. Ambika Jindal**
**Research Scholar**
&
**Dr. Himanshu Arora**
**Assistant Professor**
&
**Dr. Priyanka Tyagi**
**Assistant Professor**
Department of Basic and Applied Sciences
School of Engineering & Sciences, G.D. Goenka University
Gurgaon, Haryana, India

## Abstract

The microbes become resistant naturally, but misuse and overuse of antimicrobial drugs increasing this process rapidly. Due to rapid development of antimicrobial resistance, it is difficult to treat with present antimicrobial drugs. Hence, to overcome this global problem there is an urgent need to produce new antimicrobial drugs. The Ligand metal complex is an interesting field of coordination chemistry, which shows promising result in medicinal biology. In this, the metal ions play an indispensable role in enzyme activation and structural organization of microbes. The chelation of metal with ligand promotes the penetration of these complex in microbes' body due to increase in its lipophilicity. In the current study, a series of phenolate based ligands and their metal complexes were synthesized. The synthesized ligands and their complexes are characterized by ultraviolet-visible (UV-Visible), nuclear magnetic resonance (1H-NMR), and Fourier-transform infrared (FT-IR) spectroscopy. The antibacterial activity of these ligands and metal complexes was evaluated by using agar well diffusion method against gram-negative and gram-positive bacteria and compared with standard drugs. The present study identified that Ligand metal complexes are found to be effective against both groups of bacteria.

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# Qualitative Estimation of Phytochemicals in Five Leaf Extracts – Exploring its Use in Functional Finishing of Textiles

**Ms. Sirisha Deepthi Sornapudi**
**Research Scholar**
Department of Textiles & Apparel Designing
College of Community & Applied Sciences
Maharana Pratap University of Agriculture & Technology (MPUAT)
Udaipur, Rajasthan, India

## Abstract

Plants are a rich source of diverse bioactive compounds, which are beneficial to humans and have been exploited for their pharmaceutical value since time immemorial. In the present study, qualitative phytochemical analysis has been carried out for five different types of leaves like guava, vitex, lemon, custard apple, and moringa. The three types of extracts viz., methanol, ethanol, and aqueous are prepared from shade dried leaves. The phytochemical tests analysed include alkaloids, glycosides, tannins, phenols, flavonoids, saponins, terpenoids, gums and resins, and phytosterols. The alkaloid presence has been observed only in the aqueous extract of custard apple, methanol, and ethanol extracts of guava, vitex, and moringa. The glycosides are present in aqueous, methanolic, and ethanolic extracts of guava leaves, aqueous extract of moringa, lemon, and custard apple. The presence of tannins has been only recorded in the methanolic extract of guava and aqueous extract of moringa leaves. Moreover, the phenolic content has been found negative in methanol and ethanol extracts of moringa and lemon. It is to be noted that except for moringa methanolic leaf extract, all four methanol extracts namely guava, vitex, lemon, custard apple showed a positive presence of flavonoids. Saponins are present in all three extracts of guava and lemon, methanolic and aqueous extracts of vitex, ethanolic and aqueous extracts of moringa, while they were absent in three different extracts of custard apple leaves. Interestingly, both the ethanol extracts of guava, vitex, and moringa and methanol extracts of custard apple and moringa did not show the presence of terpenoids. The phytosterol presence has been observed in methanol and ethanol extract of guava, vitex leaves, and ethanolic extract of lemon leaves. Also, gums and resins are present in all the aqueous extracts of five leaves, while the methanol and ethanol extracts of all five plant leaves recorded an absence. Plants are known to defend themselves against nature by inherently producing secondary metabolites, which have significant ecological and chemical defensive roles. The ecological biochemistry of plants can be studied and employed by a man in other spheres such as clothing. Several research studies have reported that health care textiles are developed using various plant parts. There is a need to understand, which of these plants and their specific parts can contribute to beneficial properties that can help produce UV protective, antibacterial, ayur, and pain relief clothing. The present research is an endeavour to understand the aspects in ecological biochemistry and its suitability to the functional finishing of textiles.

# Quantitative Estimation of Amylase Activity in Eri Silkworm *Philosamia ricini* (H.) Fed with Seven Castor Genotypes

**Dr. Chumkijini Chhatria**
**Assistant Professor**
&
**Dr. Sunanda Sahoo**
**Senior Lecturer**
&
**Dr. T.V. Rao**
**Retd. Professor**
School of Life Sciences
Sambalpur University
Sambalpur, Odisha, India

## Abstract

Amylase is one such key enzyme responsible for disease resistance and also involved in digestion and metabolism of carbohydrates in insect. In the present investigation an attempt has been made to estimate the quantity of amylase activity of body tissue, haemolymph and silk gland of eri silkworm *Philosamia ricini* (H.) fed with leaves of seven different castor (*Ricinus communis*) genotypes (DCH-519, DCH-177, DCS-107, Jwala, Jyothi, NBG and NBR). It has been observed that amylase activity of body tissue increased from $1^{st}$ to $5^{th}$ instar. In addition to this, significant variation is observed in the amylase activity of haemolymph of $4^{th}$ instar with respect to eri silkworm larvae fed with different castor genotypes, wherein it increased from $1^{st}$ to $4^{th}$ day of $4^{th}$ instar larval stage. In $5^{th}$ instar amylase activity, there is a significant increase from $1^{st}$ to $4^{th}$ day, whereas it declined in $5^{th}$ and $6^{th}$ day. The amylase activity of silk gland increased from $1^{st}$ to $5^{th}$ day and declined in the $6^{th}$ day with respect to eri silkworm fed with different castor genotypes. Thus, it is varied in case of eri silkworm fed with different castor genotypes. In this research study, the two-way ANOVA indicates significant variation in amylase activity in body tissue with respect to larval instars as well as castor genotypes ($F_1$=1088.48, $F_2$=19.40 at $p< 0.001$ and $p<0.01$). Similarly, it indicates a significant variation in amylase activities of haemolymph with respect to days of $4^{th}$ instar as well as castor genotypes ($F_1$=81.23, $F_2$= 14.11 at $p< 0.001$ and 0.01). Furthermore, two-way ANOVA indicates the significant variation in amylase activities of silk gland with respect to days $5^{th}$ instar ($F_1$=97.98 at $p< 0.001$). However, the variations in amylase activities of silk gland have been found insignificant with respect to castor genotypes, which may lead to good potency to cocoon production.

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# Characterization of Cellular Automata for Convergence

**Dr. Biswanath Sethi**
**Assistant Professor**
Indira Gandhi Institute of Technology (IGIT)
Sarang, Dhenkanal, Odisha, India

## Abstract

The researchers have shown their interest on the study of global behavior of CA since the inception of cellular automata (CA). This present study has been funded by SERB-EMEQ, wherein it reports the convergence of elementary cellular automata (ECA) under asynchronous update. The ECA rules are characterized considering an arbitrary cell updated in each time step. Also, this research work has identified 4 classes of asynchronous cellular automata (ACA) depending on their convergence to some fixed-point attractors. The Class C1 ACA always converge to fixed point attractors. The ACA of Class C2 almost surely converge to fixed point attractors, but the convergence time is higher than that of the Class C1 ACAs. Also, it is important to note that Class C3 ACAs never converge to any fixed-point attractors. The patterns generated from these ACAs are chaotic in nature. However, the convergence or non-convergence of Class C4 ACAs cannot be predicted. Moreover, a set of CA states called attractors are identified towards, which neighbouring states are asymptotically approaching whilst the course of their dynamic evolution. The attractors can be of length 1 (called as fixed-point attractors) or of length more than 1, which are referred to as multi-state attractors). The present study considers all the 256 ECA rules and considered that in each discrete time, an arbitrary cell is selected to update. This mode of update of cells is known as fully asynchronous CA. The above-mentioned characterization of local cellular automata (CA) rules guides us to understand their global dynamics. Thus, to study the global behavior, the researcher simulated the ACA rules considering 'FIAT-LUX' CA simulator.

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# First-Principles Studies of Cr and Nd co-doped ZnO

**Dr. Kausik Mukhopadhyay**
**Assistant Professor**
Department of Physics
City College, Kolkata, India
&
**Ms. Priyanka Banerjee**
**Research Scholar**
Department of Physics
Kazi Nazrul University, Asansol
West Bengal, India

## Abstract

Zinc oxide (ZnO) acts as a direct wide-band gap material and possesses exceptional properties and innovative applications in spintronics, photovoltaics and photocatalysis, which has been extensively used in light emitting devices and solar cells. Several research studies have been carried out on ZnO based dilute magnetic semiconductors (DMSs). Moreover, there have been many research works of room temperature ferromagnetism in 3d transition metal (TM) doped DMSs. However, the 3d electrons in 3d TMs are exterior and delocalized, therefore the orbital momentum is often zero and gives a small total magnetic moment per atom. On the other hand, rare earth (RE) atoms have partially filled f-orbitals, which carry high magnetic moments that can be born on a single ion and may take part in the magnetic coupling as in the case of TMs with partially filled d-orbitals. The present research work is based on first-principles simulations, which investigated the structural, electronic, and magnetic properties of TM chromium (Cr) and RE neodymium (Nd) co-doped ZnO within the framework of density functional theory (DFT). The results are drawn from the analysis of energy band structure and density of states, wherein the values are observed from spin-polarized calculations using DFT. Interestingly, the observation by the researchers indicated that value of total magnetization of Cr and Nd co-doped ZnO have been substantially enhanced when compared to that of pure ZnO.

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# An Experimental Study on Polymer Based Formulation for Treatment of Acute Wound

**Ms. Megha Gupta**
**Research Scholar**
&
**Dr. Priyanka Tyagi**
**Assistant Professor**
Department of Basic & Applied Sciences
School of Engineering & Sciences
G.D. Goenka University
Gurugram, Haryana, India

## Abstract

Acute wound is a skin injury that causes a break in the skin. This acute wound can be treated using a simple and cost-effective material prepared from polymer through different concentration of Curcumin. The extract prepared out of Curcumin will act against huge microbes and bacteria at the site of wound, wherein it is coated by spray pyrolysis on fabricated polymer. The antimicrobial activity of prepared extract has been evaluated against Escherichia coli and Staphylococcus aureus by disc diffusion method. Moreover, the disk diffusion studies have proved that the antimicrobial activity against gram-positive and gram-negative bacteria. The fabricated material has been characterized by Fourier transmission infrared spectroscopy, Scanning electron microscopy, and Thermal gravimetric analysis. Fabricated polymer formulation has been characterized by many studies as bleeding time, blood adsorption, clotting time, Homeostasis, moisture uptake, swelling ratio. The present study focuses on use of Curcumin extract with polymer for evaluation of acute wound treatment. The study suggests that future researchers shall use this method for wound dressing based on rat model. The rat model dressing is based on rat incision through punch biopsy method. Also, different groups are stabilized to determine the best activity of wound healing, wherein the control group almost taken 11 days to cure completely. Moreover, the wound area measurement and skin tissue histopathology showed wound closure increase from day 4 to day 7 in a group, which contain high amount of Curcumin. Hence, the present research work authenticates the treatment of wound by natural extract and natural polymer to enhance healing rate as compared to normal days.

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# Impact of Lockdown in Reducing Carbon Monoxide in Atmosphere – An Environmental Overview

**Mr. Uday Kumar Sinha**
**Assistant Professor**
Department of Vocational Studies
Guru Nanak College
&
**Dr. K. Bandyopadhyay**
**Associate Professor & Head**
Department of Physics
Binod Bihari Mahto Koyalanchal University
&
**Dr. S. C. Dutta**
**Associate Professor & Head**
Department of Computer Science & Engineering
BIT, Sindri
Dhanbad, Jharkhand, India

## Abstract

The lockdown due to COVID pandemic has abruptly slowed down the mobility of vehicles at large. However, it has affected or controlled the Carbon Monoxide (CO) emission from vehicles in accordance with transport and other utilities across many countries within the globe. In other words, the global warming has decreased to some extent. Keeping these aspects in view, the researchers have studied the environmental aspects with regard to air quality of Dhanbad of Jharkhand State using the data provided by Central Pollution Control Board (CPCB). Particularly, CO concentration has been analyzed during the first and second lockdown periods. The year-wise and week-wise analyses of data available during the lockdown period revealed that sharp reduction of CO concentration had been taken place in the first lockdown period, which was of the order of 58%. It has been observed that this reduction was mainly due to stiff and inflexible restrictions, which has been imposed in various sectors to reduce COVID infection. The study suggests a well-regulated and well-monitored functioning of industries, coal mines and movements of vehicles, which would be helpful in lowering of CO concentration in the atmosphere resulting in the decrease over production of greenhouse gases and cause minimum consequences of global warming.

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# Digitalization of Self-Help Groups and their Impact on Indian Economy – A Conceptual Review

**Dr. Hema Srinivasan**
**Associate Programme Director**
NFED Business Facilitators Forum (NBFF)
National Foundation for Entrepreneurship Development (NFED)
Coimbatore, Tamil Nadu, India

## Abstract

India is a country in which stone-age tribal communities and twenty-first century condominiums cohabit. The bullock carts and bullet trains are contemporaries. Likewise, even in the financial services sector, despite expansion taking place with increased outreach of mainstream institutions through a range of technology platforms and novel institutions like small finance banks and payments banks coming into being, the niche area for microfinance will continue to exist, not only till the complete eradication of poverty, but also even beyond that. In the nooks and corners of the country NGO-MFIs, for-profit MFIs, Self Help Groups (SHGs) will keep up their activities, providing services to the needy as long as they are demanded. The National Bank for Agriculture and Rural Development (NABARD) in association with the Department of Financial Services, Ministry of Finance, Government of India continues to implement schemes for promotion and financing of Women Self Help Groups in the country. The schemes of NABARD provide credit linkage with banks and also serves as business facilitator to many Women SHGs throughout India. Therefore, regular monitoring of SHGs help in assessing the loan status of women entrepreneurs. Moreover, the digitalization of the details of self-help groups has been initiated to facilitate the growth of sustained financial inclusion. This has been initiated to render banking services to women members of SHGs, promote sustainable livelihood opportunities to the members and facilitate effective implementation of other social development programmes for women through SHGs. With an objective to foster financial inclusion, NABARD has started its pilot project in 2015 towards digitization of women's self- help groups so as to improve the quality of interface between SHGs and banks for hassle-free delivery of banking services. It is a step taken by the subsidiary of Reserve bank of India (RBI) to empower women through information technology. Thus, digitization of self-help groups has been initiated to bring in transparency and credibility to operations of SHGs through in-built grading Management Information Systems (MIS) thereby increasing the comfort of bankers in credit appraisal, disbursement and monitoring. This paper attempts to assess the development of the NABARD's project commenced in 2015. Also, it envisages the effects of digitalization towards economic improvement of SHGs and analyzes the challenges in accordance with the present pandemic scenario.

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# Multidimensional Impact of Women Entrepreneurship in Society: A Conceptual Overview on Ranchi District of Jharkhand in India

**Ms. Khyati Munjal**
**Research Scholar**
&
**Dr. Arvind Hans**
**Associate Professor & Head**
Department of Business Management and Commerce
Usha Martin University
Ranchi, Jharkhand, India

## Abstract

We all know that the change is the only continuous flow, which remains uninterrupted. Our world has changed drastically in last one decade in terms of educational avenues. Recently, we have started treating education as a destination and toolbox for socio-cultural transformation. The process involves upskilling, continuous learning, updating critical thinking, creating diversity, etc. Hence, considering all such aforementioned processes, we can clearly visualize that globally there is an increasing role of women. This has paved the way for women to be in all sectors more precisely in the business sector. The emergence of women entrepreneurs has led to an engendered perspective in the realm of entrepreneurship. Women entrepreneurship is closely intertwined with societal and economic benefits. Despite the fact that women constitute nearly half of the population in India, their participation in entrepreneurial activities remains limited. The contribution for socio-economic development role of women could be bifurcated in two classes, wherein first category is blessed with legacy supportive family platform where entrepreneur and social activist like Nita Ambani, Parmeshwar Godrej, Ayesha Thapar and many other appears who have ready track to move and run, and on the other side the talents in villages from middle- and lower-class families strive hard to transform the mob and do miracles in their field. Now, advertising to the corporate world there clearly exist gender diversity. Also, it has been proved through various research studies that though women are better in education and various fields, their services are often not being recognized to the extent, which they really deserve. Though most of the companies have development programs for women, still their representation in the Corporate Boards is outnumbered. Recently, the changing trend show us a positive augmentation. The present study is an attempt to decipher the concept, profile and dynamics of women entrepreneurship in the selected districts of Jharkhand state of India. It aims at analyzing the prevalence of women entrepreneurship and its multiple facets towards socio-economic prospects. The study is based on conceptual analysis through secondary sources based on significant number of women entrepreneur cases from Ranchi District of Jharkhand. It has been observed that women's socio-economic progression has been low. Hence, strenuous efforts and vigorous steps have to be taken by government and private companies to fill in the gaps and to promote women entrepreneurship development.

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# A Study on Understanding the Potential for REIT Market in India: Lessons from US and Japanese REIT Markets

**Ms. Jaya G. Prabhu Parrikar**
**Assistant Professor**
Department of Commerce
Dnyanprassarak Mandal's College & Research Centre
Assagao, Goa, India

## Abstract

The real estate is the one of most valued asset class in India, which comprises of major allocation in retail investor's portfolio. However, the investments in real estate are mainly in physical properties. In the recent past, real estate prices in India, which includes residential as well as commercial properties have shown a meteoric rise and property buying has become unaffordable to a large section of population. Hence, to facilitate the retail investors to participate in the real estate market, Real Estate Investment Trust (REIT) has become an alternative investment. The REIT market in India is at a nascent stage and yet to gain momentum. The study attempts to draw lessons from USA and Japanese REIT market. The reason being these two economies have well established and matured REIT market. The study attempts to understand the performance of REIT indices in accordance with stocks S & P 500 index and Nikkei 225 index. Also, it intends to analyse the REIT performance in India.

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# An Empirical Study on Lack of Scientific Training and its Overall Impact on Quality Research in India

**Dr. Kabirdoss Devi**
**Assistant Professor**
&
**Dr. J. Sabitha**
**Assistant Professor**
Department of Commerce
College of Science & Humanities
SRM Institute of Science & Technology
Ramapuram, Chennai, Tamil Nadu, India

## Abstract

The lack of frequent scientific training in research domain is the most devastating lacunae among various problems pertaining to quality research in a country like India. The reason being scientific research demands quality research output for authenticity towards strengthening and promulgating the research base. It is important to note that when most of the research contributions are carried out based on inadequate support of methodology, then it would often result in the outcome, which does not depict the reality. This research work has considered various parameters like difficulties in deciding the research from the positivism, shortage of knowledge in the phenomena of being observed and measured, lack of ability in separating the researcher's perspective in an inquiry, absence of awareness on producing consistency results and lack of precision. Keeping this in view, the present research addresses on various problems and challenges that would occur while writing a scientific research proposal. Hence, the target group for this research included academicians and research scholars from all streams of engineering, biology, plant sciences, pharmacology, arts, and management. The study included 100 samples through convenient sampling procedure and data have been collected through administering a structured questionnaire using descriptive research design. The findings and suggestions are highlighted based on appropriate statistical analysis.

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# A Conceptual Study on Employees' Mental Wellbeing Amidst New Normal: Major Factors and Outcomes

**Dr. Swati Mishra**
**Associate Professor**
Department of MBA
United School of Business Management
Bhubaneswar, Odisha, India

## Abstract

The Covid-19 pandemic has completely paralyzed the normal functioning of people around the world. Counteractive measures like lockdown and social separation are now considered to be the new normal. The work from home is more tedious and time-consuming along with household duties, has made life both physically and mentally taxing. The use of digital technology is the need of the hour nowadays. These drastic changes in the work schedule brought more physical and mental challenges for employees. It is because of remote working conditions employees feel lonely and isolated. They do not have face-to-face interaction with their boss and co-workers, which makes them more frustrated and annoyed. Moreover, with the increase in environmental uncertainties, growing digital responsibilities at work, and dealing with household commitments, their physical and mental health have been affected. In furtherance, the understanding of aforementioned aspects is possible through adopting a systematic structure for analyzing the various publications for the past few years. This conceptual study tries to fill-in the gaps and attempts to explore the main factors, which are highly responsible for disturbed mental health among the working community. Furthermore, the study also intends to explain the outcomes of such factors and evaluates the various organizational efforts in accordance with human resource management perspective. The findings of this conceptual research can provide suggestive measures to minimize the glitches faced by employees within organizations. Also, the adoption of these measures could prove to be a game-changer and enhance the working spirit of employees in this pandemic scenario.

# Impact of Online Learning Ecosystem in the Education Sector – An Overview

**Dr. A. Bharathy**
**Assistant Professor**
Department of Management
Pondicherry University Community College
Lawspet, Puducherry, India

## Abstract

The educational ecosystem across the world has been subjected to disruptive methodologies from immemorial times in accordance with gurukul system of learning to classroom learning. This is due to the fact that advent of technology in learning with computers, web-based learning, mobile and social networking tools. However, none have been far disruptive than the online or e-learning despite being considered as a subset of distance learning. It has not only made learning inclusive but also has added complexity to the growing digital divide alongside lack of readiness on the part of learners. This research study intends to explore the learning environment influenced by the transformation occurred in education sector due to online learning ecosystem. Also, to provide the possible suggestions for improving the outcome-based learning.

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# A Study on Consumers' Level of Awareness and Perception towards Green Products with Special Reference to Ernakulam District, Kerala

**Mr. Bitto Paul**
**Research Scholar**
&
**Dr. Devi. P**
**Assistant Professor**
Department of Commerce
Thanthai Hans Roever College
Perambalur, Tamil Nadu, India

## Abstract

The shifting from conventional products to green products is one of the new concepts adopted by several developed and developing countries to protect the environment and safeguarding nature for achieving sustainable development. These countries intend to protect the environment and safeguarding nature for achieving overall sustainable development. This research study has attempted to understand and examine the consumers' level of awareness and perception towards green products in Ernakulam District of Kerala State. The study included 150 college teachers from Ernakulam District as samples through convenient sampling procedure. A well-structured questionnaire has been administered through Google Form (online) to collect data, wherein the results showed that many consumers have adequate knowledge about green product. In addition to this, majority of them view that green product is healthy and believe it offers high quality over other conventional products. The study also provides few suggestive measures, which will help the producers and marketers to plan their marketing strategy for promoting their green products to a large extent.

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# Modelling and Forecasting of the Indian Stock Market using GARCH Family Models – An Analysis

**Mr. K. Kannan**
**Research Scholar**
&
**Dr. S. Balamurugan**
**Assistant Professor**
Periyar Institute of Management Studies
Periyar University, Salem, Tamil Nadu, India

## Abstract

Today, stock market volatility is inevitable, and it is the prominent spot making the immense sum of money within a brief time frame. Subsequently, volatility is vital for money related practitioners, investors, market members, retail finance specialists, regulators, and analysts. Moreover, the changing and becoming red and green in a limited time is the essence of the stock exchange. All the investors are expecting a higher rate of return for their investments. In India, just 2% of the total population invests their money in the stock market because of lack of awareness about the securities risk and return many investors felt it difficult to select their investment stock. The present study attempts to use the Generalized Autoregressive Conditional Heteroskedasticity (GARCH) family models for modelling and forecasting the price volatility of the NIFTY 50 companies listed under the Indian stock market, using the daily adjusted closing price for the financial years from 2011 to 2021 respectively. The study adopted analytical research design and purposive sampling method, wherein the researchers have taken two important sectors (Financial Services and Automobiles) from NIFTY 50 index listed from 1st April 2011 to 31st March 2021 based on sectors weightage. The models of forecasting like Generalized Autoregressive Conditional Heteroskedasticity- symmetric GARCH (2,1), asymmetric GARCH models like Exponential GARCH–EGARCH (2,1) and Threshold GARCH–TGARCH (2,1) have been considered in this study. The researcher used different combination of ARCH and GARCH lags and high-order models are generally tested to select the most suitable model. Also, to understand the ARCH effect, Heteroskedasticity Test like - The Lagrange Multiplier (LM) test for ARCH has been used to see the presence of Heteroskedasticity in residual of the return series. The reason being, if this ARCH effect is present then one can use ARCH/GARCH models. The stationarity test like Augmented Dicky-Fuller test has been carried out to see whether the return series are stationary. Also, the test of normality like Jarque-Bera test has been conducted to see whether the return series were normally distributed. The performance of these GARCH models is evaluated using two statistical errors like Root Mean Square Error and Mean Absolute Error. It has been observed that TGARCH have showed outperformance. The study suggests that every investor should have systematic investment plan because it is considered as one of the most efficient ways to benefit from volatility. Also, before making the investment decisions, the investors are advised to analyse and see the selected company's performance.

# Refugee Entrepreneurship - An Overview

**Ms. Nidhi Banthia Mehta**
**Founder & CEO**
Self Achievers
Jaipur, Rajasthan, India

## Abstract

Entrepreneurship is the backbone of many developed and developing countries in this world. It is a tool that requires no pre-condition of education, which breaks all barriers and differences in terms of class, racism, ethnicity and colour. The interesting feature of entrepreneurship is that it does not require an economic status and / or conditions. Moreover, entrepreneurship can be fostered by anyone and can be an effective mechanism to remove inequalities in the society, create employment opportunities for uneducated and marginalized communities so as to bridge the gaps of gender and social inequalities within a society. Recently, the researcher happened to watch a four-minute documentary on Cable News Network (CNN) of a refugee woman fleeing from Syria with two children in tow and crying. The situation is such that she had lost everything she possessed and lost hope of survival even and wondered how she was going to protect and take care of her two little children. This aforementioned case viewed in the form of documentary has impacted and poked the researcher constantly to reinvigorate the possibilities for capacity building through skill development of refugees. In doing so, the refugees like her can stand up by themselves in their new home country with economic independence and become a potential contributor to the GDP of the concerned host country. Also, these special skills can allow the refugees to create a dignified life and become a ray of hope for their families. The process to garner these communities is possible through Refugee Entrepreneurship. It is also a process of creating entrepreneurs from limited resources or zero financial resource backing. This present research attempts to understand the curriculum requirement for entrepreneurship training programme from 'Ideation to Manifestation'. These kinds of training have to focus more on reskilling and upskilling refugees in accordance with their existing skill sets so as to create them to become entrepreneurs and growth contributors. Furthermore, the study suggests a comprehensive framework has to be developed through an extensive research study on this area, which will facilitate and sustain socio-economic development.

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# Managerial Functions of Private Extension Service Providers in Andhra Pradesh – An Empirical Analysis

**Dr. S. Naveen Kumar**
**Senior Scientist & Programme Coordinator**
Krishi Vigyan Kendra (KVK)
Professor Jayashankar Telangana State Agricultural University (PJTSAU)
Nizamabad, Telangana, India
&
**Dr. P. Gidda Reddy**
**Former Director of Extension**
Acharya N. G. Ranga Agricultural University (ANGRAU)
&
**Dr. R. Ratnakar**
**Former Director**
Extension Education Institute
Acharya N. G. Ranga Agricultural University (ANGRAU)
Hyderabad, Telangana, India

## Abstract

India is the world's second largest producer of fruits and vegetables. Despite this, India lags behind global average yields for most crops. Governments over regulation and ill-conceived policies are major hurdles of agriculture revolution since green revolution. The larger section of small and marginal farmer were not touched and not allowed to grow in their areas of core competence. Moreover, their choice is very much limited and most of the time they are not provided with market driven information to face the global challenges since last few decades. It is to be noted that under these circumstances the magic solution would be upscaling the extension services that act as a bridge for transferring the existing knowledge to neglected farmers through a combination of science and adapting latest techniques of information technology. In this context, the present study focuses on analyzing the managerial functions of private extension service providers. The study adopted descriptive research design, wherein 45 samples are drawn through purposive sampling procedure by including TATA Rallis India Ltd., Syngenta India Ltd., Indofil Chemicals Ltd., Nagarjuna Fertilizers and Chemicals Ltd., and Monsanto India Ltd., covering the three districts namely Mahabubnagar of Telangana; Anantpur and Prakasam Districts from coastal Andhra Pradesh. The results revealed that majority of the respondents (57.8%) belong to medium category. Furthermore, the respondents have responded high towards the ten managerial functions viz. planning (75.6%), organizing (93.3%), professionalism (91.1%), feedback (91.1%), decision making (88.9%), leadership (84.4%), training (68.9%), rewards & awards (66.7%), conflict management (60%) and human resource development (46.7%). The study suggests that regular capacity building programmes, effective feedback mechanism, timely and suitable fast recognition procedures either physical

or hygienic incentives whichever motivate and / or upscale their knowledge level, reorienting skills and change in attitude while delivering the services have to be introduced. Also, it paves a way and gives the scope to do more insightful and elaborated researches need to be done not only in the area of managerial functions but also essential services need to be delivered contextually and timely.

# A Study on Entrepreneurship Development in the Post-Covid Scenario and Governmental Policies in India

**Mr. Rishabh R Sundar**
**Student**
VIT School of Law
&
**Mr. Shrinivaas Balaji**
**Student**
VIT School of Law
&
**Dr. Gopinathan N**
**Associate Professor**
VIT Business School, Vellore Institute of Technology
Chennai, Tamil Nadu, India

## Abstract

The onset of global pandemic has left micro, small and medium scale industries reeling for labour and logistical support. Moreover, the businesses all over the country are still suffering from heavy losses. It is to be noted that more than 95% of industries came to a sudden halt, which led to increase in employee turnover rate as they could not provide the demanded wages. The clothing and apparel industry suffered a loss of over INR 150 crores just within two months of introducing the lockdown in India. The commodities produced could not be shipped appropriately while customer demand also came to a downfall. Companies across India began to adopt new trends that primarily enabled them to stay relevant through this pandemic. In furtherance, they largely began to digitize their functions and actively looked to collaborate with parallel industries in order to continue functioning and maintain a steady flow of income. The one industry that withstood this onslaught without as much change is the health and sanitation industry. As a result of these developments, entrepreneurship development came to a standstill as new entrepreneurs have been petrified to invest in a start-up. This in turn necessitated the government to come up with policies and incentives to provide financial assistance and support the growth of these industries. It is in the light of these changes; the government has decided to put forth measures to ease the stress on budding entrepreneurial sector of the country. In addition to support packages, the government also envisaged into the possibilities in taking measures to facilitate the mental well-being of these entrepreneurs. The Micro, Small and Medium scale industry sectors are supported by the Indian Government through its ministries. Also, priorities have been given to mass production of masks, gloves, ventilators and PPE kits. These ministries also approached the State Governments of each State to exempt MSMEs from fixed costs and electricity bills. The conceptual analysis carried out by the researchers attempted to provide the various measures taken by the government in the light of developments in the post COVID environment. Also, to project on how these measures has impacted the performance and growth of entrepreneurship development in India.

# Impact of Job Satisfaction on Employee Performance in Private Varsities at Himachal Pradesh

**Mr. Kapil Kapoor**
**Research Scholar**
&
**Dr. Jyoti Sondhi**
**Associate Professor**
School of Management
Abhilashi University
Mandi District, Himachal Pradesh, India

## Abstract

The job scenario has been changing at all spheres due to its nature and demands regardless of sectors. In furtherance, job satisfaction is an inseparable component in measuring the output or efficiency of employees in a workplace. It plays a crucial role in all domain areas. Keeping these aspects in view, the present study intends to examine the impact of job satisfaction on employee's performance. The aspects comprised of factors like employee immediate supervisor factors on job satisfaction, influence of employee personal characteristics on job satisfaction and influence of employee pay package. The study has been carried out on three selected private varsities at Himachal Pradesh covering a sample size of 110 employees using simple random sampling technique. The results revealed that increase in employee immediate supervisor factors will increase employee's job satisfaction. Also, the overall observation is that job satisfaction has an impact on employee's performance. The study suggests enhancing the level of job satisfaction of employees in private varsities by concentrating on areas of personal characteristics, pay package and employee immediate supervisor factors will motivate them to attain higher job performance.

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# Artificial Intelligence and Management of Customer Relationship in Telecom Industry – A Conceptual Overview

**Ms. Siddhi Sagrika**
**Research Scholar**
&
**Dr. Shailja Dixit**
**Associate Professor**
Department of Management
Amity Business School
Lucknow, Uttar Pradesh, India

## Abstract

In India telecom sector is one of the rapidly growing sectors. The advancements in technology and globalization have compelled almost every sector to use Artificial Intelligence (AI) in terms of achieving customer-oriented approach and customer satisfaction. Telecom industry is a service sector, wherein customer satisfaction plays an important role. Now-a-days tools for customer satisfaction has to be replaced by technology in the form of artificial intelligence. The use of artificial intelligence is highly competitive and a cost-effective for an industry like telecom where service is the key to success. Moreover, artificial intelligence generates customer insights that can be further used for customization of offers and services to consumers. In furtherance, for a service industry, AI enable to provide quality services by removing human error and by creating a standardized platform for service and after sales service. The major objective of this research paper is to conceptually study the various types of artificial intelligence being used in telecom industry and how it is helping the organization to maintain a healthy customer relation. It also examines the application of AI in telecommunications industry sector. Also, the research found that AI's first main application in telecommunications is in the network management area. Furthermore, the expert systems and machine learning are the two AI techniques that have been widely used in telecommunications, while machine learning and distributed artificial intelligence are the two AI techniques, which are most promising for the future. The research also highlighted that different AI techniques have their unique applications in the telecommunications industry.

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# Behavioral Finance, Intricacies and Intervention with Traditional Finance - A Conceptual Approach

**Dr. Anupama Jonnalagadda**
**Associate Professor**
Department of Business Administration (Management)
Badruka PG Center, Kachiguda
Hyderabad, Telangana, India

## Abstract

Behavioral finance attempts to explain and increase the understanding of reasoning patterns of investors, including the emotional processes involved and degree to which they influence the decision-making process. The behavioral finance is intertwined with concepts of psychology, sociology and finance. Behavioral Finance is more of checking the normal pattern of the financial decision taken by a person, whereas Traditional Finance is more rational, which focuses on mathematical calculations, economic models and checking the market behavior. It is important to note that while conventional academic finance emphasizes theories such as Modern Portfolio Theory (MPT) and Efficient Market Hypothesis (EMH), the emerging field of behavioral finance investigates the cognitive factors and emotional issues that impact the decision-making process of individuals, groups, and organizations. The study attempts to introduce some general principles of behavioral finance, which comprises of overconfidence, cognitive dissonance, regret theory, and prospect theory. The researcher also mentions few theories focusing on behavioural finance concept. Also, this study provides strategies to assist individuals to resolve these mental issues and emotional pitfalls by recommending some important investment approaches for those who invest in stocks and mutual funds.

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# Effect of Political Gimmicks on Indian Stock Market – An Overview

**Dr. Biplab Lagardo**
**Assistant Professor**
Department of Commerce
Ramthakur College
Agartala, Tripura, India

## Abstract

The stock market indices move as a result of many underlying factors, which has direct or indirect bearing upon the listed companies. A trader in stock market needs to have a complete understanding of all factors that affect the stock market indices. The trading in stock market is all riskier because the indices move drastically causing havoc changes. It is a very common phenomenon in India that whenever the stock market shows bearish movement, the political leaders announce very promising schemes for the business and industry with motive of upward trend of the stock market and the economy as a whole. Furthermore, based on literature review, this research tries to identify the major factors, which are very much vital for the investors who are interested towards trading in the stock market. More importantly this conceptual research tries to examine the effect of political gimmicks upon the indices of stock market on the basis of secondary information. Also, it envisages on whether such political gimmicks have a direct effect on the stock market. In furtherance, to understand whether such effect is a short-term or long-term in nature with regard to stock market.

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# Entrepreneurial Case Study - From Hobby to E-Business

**Dr. G. Padmini Devi**
**Lecturer**
Department of Home Science
Government College for Women (Autonomous)
Guntur, Andhra Pradesh, India
&
**Ms. Sirisha Deepthi Sornapudi**
**Research Scholar**
Department of Textiles & Apparel Designing
College of Community & Applied Sciences
Maharana Pratap University of Agriculture & Technology (MPUAT)
Udaipur, Rajasthan, India

## Abstract

Entrepreneurship is a power tool for economic empowerment of women to turn their passions into profits. Philipp Harper defines an entrepreneur as "men and women who take capital -- their own or somebody else's -- and use it to beget more capital". This paper is a case study-based presentation on the journey of a hard-core foods and nutrition professional into e-business. The enterprise 'green gold jewellery' supplies customized handmade jewelry to customers all over the world. The present study documents idea genesis and reasons for setting up the enterprise, management practices followed, customer care services offered, and challenges faced as a women entrepreneur. Moreover, with a 'own a wearable art' as the byline on its Instagram page, this eco-friendly venture offers made-to-order jewelry like terracotta jewelry, cloth collars, fabric jewelry, MDF hand-painted jewelry, and home décor since October 2017. The success of this enterprise lies in the owner's skill in hand painting and handmade articles taking inspiration from a variety of art forms like Ganjifa, Kalamkari, Kutch work, Cheriyal, Madhubani, Warli, and Prabhavali to name a few. The successful career as a foods and nutrition scientist detoured into this e-business is due to personal reasons such as a deep self-interest, art in the genes, being creative is energizing and productive use of time. Also, having the possession of needful skills for the enterprise, a reasonable demand of the products made, easy and timely availability of raw materials, and uniqueness of enterprise have been some of the reasons for business to withstand since four joyful years. Despite Covid-19, the business registered steady growth in its clientele across the globe. Furthermore, operating from a creative corner of the comforts of a home, the products have travelled far and wide from India to USA. The raw material is procured from local sources in bulk and varies from MDF, combs, wood plates, embroidered cloth, clay, tea kettles to miniature cow heads. One-of-a-kind wearable art is marketed online daily through Instagram and Facebook via posts, reels, videos and humorous and catchy write-up. The internet is the canvas for design inspiration and marketing. The exquisite products reach their new homes in individual bubble wrapped and

box wrapped packages. Also, the customer feedback often is used as an advertisement in its client diaries Insta page. Moreover, very few challenges like dual responsibilities of work and home, more time, and intellectual inputs changing customer preferences swamp the enterprise. This case study signifies the joy of creating something new and innovative with every single hand-made product and a loyal clientele keeps the enterprise running in the virtual world.

# A Study on Consumer Views and Preferences Associated with Digital Health Applications

**Dr. Rashmi R. K.**
**II Year PGDHM**
Department of Healthcare IT Management
&
**Dr. Sarala. R**
**Associate Professor**
Department of Healthcare Management
Institute of Health Management Research (IIHMR)
&
**Mr. Srikrishna Seshadri**
**Senior Product Manager**
Department of Platform Engineering
Tata Medical & Diagnostics Limited
Bangalore, Karnataka, India

## Abstract

The Digital Health subsumes various concepts like telehealth, telemedicine, eHealth and mHealth. In furtherance, all these concepts involve usage of digital health applications, which contributes enormously to the digitalization of healthcare industry. Today, digital health applications have become indispensable with regard to COVID 19 pandemic, wherein a large sect of population has to be provided with the required treatments. In this context, these applications gain significance. Moreover, these applications exist in large numbers, but lack in optimum utilization by the consumers. Hence, there is a need to understand the features, which are valued by consumers that are facilitating to optimal usage of digital health applications. Keeping these aforementioned aspects, a cross-sectional study has been conducted through adopting a structured questionnaire. The study adopted survey research design, wherein the entire data has been collected through online mode by disseminating in social media platforms. A total of 415 samples has been received and included in this study. The data has been analysed using simple percentages, wherein the major findings with regard to preferred features revealed by the respondents are progressive tracking (70%), easy to visualize dashboards (63%), doctor consultation (58%), easy registration & login (56%) and lab tests (54.8) respectively. Furthermore, the results exhibited that digital health applications are used mostly by 21-40 age group and 85% respondents use mobile devices for digital health applications. The study suggested that the existing healthcare applications need to enhance their digital health features and satisfy the online consultation needs of consumers by frequently conducting consumer needs survey and understand their needs. Particularly, by including features like patient-centric, and time saving in its digital health applications and guiding the consumers effectively in a better way. Also, this will give them a feel that is closer to a physical healthcare service. Thus, increasing these devices' usage for remote monitoring of chronic diseases can be a great source of regular observations of consumer's health conditions.

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# Effect of Gender on Emotional Intelligence & Professional Development among Secondary School Teachers in Mumbai Region – An Empirical Study

**Mr. Ramshankar Varma**
**Research Scholar**
Department of Education
Manav Rachna University
Faridabad, Haryana, India

## Abstract

Emotional Intelligence (EI) is an important aspect, which needs to be addressed in almost all the sectors. The reason being, effect of work-life imbalances is more in the recent times, which results in unproductivity in the professional domains of workforces and may lead to unemployment. In the context of current pandemic scenario. Keeping this in view, the present study focuses on the school teachers in the academic sector, which is one of the prominent sectors. A comparative study on secondary school teachers has been conducted on 100 males and 100 females to determine how gender affects emotional intelligence and professional development, wherein parametric and non-parametric analyses have been conducted. The correlations showed significance based on item-total correlation and inter-scale correlation coefficients. The results on secondary school teachers revealed that female teachers demonstrated higher levels of EI and professionalism than male secondary school teachers. The significant differences in gender have been found for both emotional intelligence and professional development at 0.01 significance level. The high level of emotional intelligence and professional development observed in female teachers of secondary school, which is quite evident through observation of their mean scores. Also, the teachers in secondary schools with lower mean scores possesses lower level of emotional intelligence and professional development than teachers in secondary schools.

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# Judicial Activism: An Essence of Transformative Constitutionalism towards Realization of Progressive Humanitarian Laws in India

**Dr. Monika Malik**
**Associate Professor**
Department of Law
Central University of Haryana
Mahendragarh, Haryana, India

## Abstract

The present era is dedicated towards human rights celebration throughout nations of the world. Every nation is perceived as a welfare state that aims at preservation of human rights by adopting the welfare laws and policies. The laws of a nation need to be dynamic and pragmatic to satisfy the needs and aspirations of progressive philosophy of the people within a society. In India, the ultimate protector of human rights is the Constitution of India, wherein the sole responsibility is upon Supreme Court, the apex court of the country to interpret the laws and to ensure their constitutional validity and to protect the Constitution. The task of interpretation of laws by the apex court requires the activism in its decisions that can only lead to Transformative Constitutionalism towards the progressive humanitarian laws. Indian Judiciary is *sine qua non* of judicial activism that is manifested in its decisions. This judicial scrutiny of the laws leads to reforms in civil and criminal jurisprudence and ultimately leads to reforms in the society. The recent civil and criminal law reforms are the manifestations of judicial activism. The abrogation of Triple Talak by Supreme Court of India led to celebration of women rights and provided a path towards development and preservation of humanitarian principles. In criminal jurisprudence, the recent development was by scrapping out of IPC Sec-377 of Indian Penal Code 1860 and leading to its decriminalization so far it prosecutes the adults with regard to their sexual orientations irrespective of the fact that those adults are homosexuals or heterosexuals. This decision of apex court again reflected judicial activism that gave justice to LGBTQ community and preserved their long back human rights. Therefore, Indian judiciary plays a pivot role in preserving the constitutional goals by objective interpretation of the existing laws and policies. Also, at the same time it fills in the gaps that exists in the prevailing laws that leads towards progressive humanitarian laws.

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# A Conceptual Analysis of Moral Dilemma based on Reason and Care Faculties

**Ms. Arpita Basak**
**Assistant Professor**
Department of Philosophy
Narasinha Dutt College
Howrah, West Bengal, India

## Abstract

We, human beings face various conflicting or dilemmatic situation in our lives at various times. A dilemma requires moral reasoning for their solution. Moral dilemma arises in situation in which an agent can choose the right one between two equal alternatives. To illustrate the point, I consider a relevant example of moral dilemma which was given by Lawrence Kohlberg and Carol Gilligan. Kohlberg and Gilligan experimented on male and female students, namely Amy and Jack (both at the age of eleven years) to observe their different styles of thought-process. Heinz is a man of this story, whose wife is suffering from a mortal disease (Cancer). The drug which can save Heinz's wife is too costly and incidentally Heinz cannot afford to buy it. The crucial problem is the chemist refuses to lower the price of this life-saving drug. In this situation the question is, should Heinz have stolen the drug? Jake suggested that Heinz should not steal the drug. On the other Hand, Amy suggested that he should steal the drug. As a mouthpiece of reason, Heinz must think of the consequences of stealing, i.e., he could be imprisoned for doing this unlawful activity. Thus, he must think of other possibilities in order to get rid of the dilemma within the realms of the law of the land. It is to be noted that from the care-based perspective, Amy feels that the life of Heinz's wife is more precious to him than his own safety. If he is caught by the police, Amy feels the Judge will also understand that Heinz only broke the law for saving his dying wife. The present research study attempts to suggest that one should not consider the two faculties (reason and care) separately. It seems that reasoning and care do not belong in any sort of contradictory relationship. In fact, they complement each other in our thinking and praxis. This conceptual research observed that everyone reaches a point, wherein one can say that humans can become moral individuals only when they aim at reconciling both reason and care in order to develop their thinking process.

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# Parental Involvement in Online Learning of Children During COVID-19: An Overview

**Ms. Suchita**
**Research Scholar**
Department of Education
Baba Mastnath University
Rohtak, Haryana, India

## Abstract

The COVID-19 pandemic had an impact on nearly all aspects of every person's life. Children's lives were also not untouched by this, and their education was also badly affected by this pandemic due to school closures. During the lockdown, the children largely stay at home with their parents. The reason being, parents are the ones who played an active role in their children's learning at home. Home schooling has become a part of parents' and children's everyday lives. There were many challenges experienced by parents during remote learning: lack of knowledge of the internet, limited amount of time, limits on media assets, their educational level, coping with stress caused by overloaded roles, improving the learning ability and motivation of their children, etc. Moreover, parents adopted different approaches during online learning, and these parental approaches towards online schooling were related to different perceptions of learning challenges. The three main approaches were: i) the dedicated teacher approach in which parents have been involved in assisting, motivating, logistics, and checking the calendar of their child ii) the intervenor and dedicated teacher approach in which parents spent more time and executed some school tasks for their child and iii) the encourage-autonomy coach approach, in which parental involvement was that they encouraged their children to complete school chores without taking full control or accountability. Parental involvement in children's education has regularly been found to be positively related to improved academic achievement. In this COVID-19 pandemic situation, despite facing many challenges, the involvement of parents in home schooling of children has also been seen in the role of an effective teacher. Parents handled this situation effectively and adopted a suitable approach for online education of their children, wherein they constantly motivate, assist, encourage, and devote more time to maintain the enthusiasm of the children. This involvement is more pertinent in this pandemic situation for today's children to facilitate their online learning process.

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# A Historical Study on Buddhist Site of Bojjannakonda in Visakhapatnam District at Andhra Pradesh, India

**Dr. Saikumar Rudrabhatla**
**Associate Professor**
Department of Arts
K L University, Andhra Pradesh, India

## Abstract

The Buddha's influence in Southern India have been proved with the existence of numerous Buddhist sites and its rock edicts across rock-cut caves. In this context, Andhra Pradesh, which is one of the South Indian states gains importance. It is one of the Southern States in India. The Buddhist sites of Bojjannakonda and Lingalakonda located around 45 kms from Visakhapatnam District of Andhra Pradesh. These two areas are rock-cut caves on adjacent hillocks situated near the Sankaram Village, which is few kilometres away from Ankapalle, a suburb of Visakhapatnam. These two hills contain numerous monolithic stupas and dated between 4th and 9th Century A.D. The eastern hill is Bojjannakonda is also referred to as Buddhuni Konda (Hill of Buddha), wherein the rock edicts of Buddhist scriptures and a large group of monolithic stupas surrounding the rock-cut platforms of the Maha Stupa are found. This site is excavated in 1906 by Alexander Rim. The interesting aspect of this site is, it contains all the three phases of Buddhism i.e., Hinayana, Mahayana and Vajrayana. It is quite evident from Bojjannakonda that Buddhism has spread widely in this area and various regions around Visakhapatnam District. As indicated above in the Buddist sites in the Andhra Desa, one scripture, the Maha Pari Nirvana-Sutra (discourses on the last Nirvana), covers the Buddha's last days, his transit into Nirvana, his funeral, and the distribution of his remains. In the centuries immediately preceding and following the Christian era, the land of Andhra Pradesh had a remarkable increase and advancement in Buddhist Religion, Art, and Architecture. As a result, Andhra Pradesh only came to believe in Buddhism during the time of Ashoka. The present historical research attempts to understand the historical existence of Buddhism and its importance with regard to remnants of prayer halls, meditation halls, brick-built structured edifices, and rest locations at Bojjannakonda.

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# Empowering Women in Education Sector During the Pandemic - A Case Study

**Ms. Neelam Dixit**
**Director**
&
**Dr. Hema Srinivasan**
**Consultant**
Open Wonder Learn
Bangalore, Karnataka, India

## Abstract

The International Labour Organization (ILO) has assessed the economic activity of global workforce to be disrupted to the extent of eighty percent due to COVID-19. The repeated lockdowns have seriously disrupted the livelihood of people all over the world. While such instability has threatened livelihoods across the world, wherein women have been disproportionately harmed by the pandemic. The existing gender inequalities, and present new challenges of COVID-19 has affected women's economic standing in several ways. Moreover, in terms of income security, many women have already found themselves in precarious labour positions with lower earnings and limited access to social protection, making them more vulnerable in an economic downturn. Women who work in sectors such as education, entertainment, retail, agriculture, tourism, and other informal economy have been affected to a large extent. The impacts are substantially worse in developing economies, with the few existing protection mechanisms under immense pressure. Despite these mechanisms, women are facing significant barriers to accessing financial support, further extending their earning gap compared to men. However, there are practical steps taken by women in developing countries to strengthen their position in the COVID-19 era. The present case study attempts to understand the women in education sector who have lent their hands in teaching through the digital mode and have managed to sustain their profession in spite of many challenges.

# Curbing the Infodemic through Policing Pandemic - An Empirical Study

**Ms. Anika Vashisth**
**Assistant Professor**
Department of Criminology
Karunya Institute of Technology & Sciences
Coimbatore, Tamil Nadu, India
&
**Dr. Rufus. D**
**Assistant Professor**
Department of Criminology & Police Studies
Sardar Patel University of Police, Security & Criminal Justice
Jodhpur, Rajasthan, India

## Abstract

The emergence of global pandemic has brought forward many unprecedented challenges that hadplagued our lives ever since 2019. The proliferation of fake news during such times led to the burgeoning of another pandemic - the Infodemic. The Infodemic has been into existence alongside pandemic because of lack of information around the novel disease. This has stirred the wave of panic among people causing mass hysteria due to fake news. The propagation of fake news was amplified with the use of social media during pandemic, which caused innumerable issues and claimed several lives as well. The propaganda behind starting any fake news might be personal, communal or financial, which further exacerbated the crisis, especially for the police officials. The global influx of information into the daily communication have turned this into a battle that the nations cannot afford to lose. Also, to tackle this growing menace during this pandemic, an intervention by the police forces have been requested by the States in India. The fake news and vicious rumors on social media have proved to be the biggest threat after medical emergency, which claimed the lives of many police officials. Keeping these aforementioned sequences, the present research study has been conducted on 794 samples through convenient sampling procedure. The samples included officials from government and police departments during the pandemic throughout India. The data collection has been carried out through adopting survey method using online questionnaire alongside telephonic interviews by the researchers. It has been observed that around 70 percent of distress during first lockdown is due to fake news amongst public. The study discusses the practical implications through appropriate countermeasures so as to address the future challenges of fake news on police officials and provides adequate strategies to curb the Infodemic.

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# Experiences of Cyber Bullying Victimization: A Survey among Youngsters of Higher Education Institutions in Jodhpur and Jaipur Cities, Rajasthan

**Ms. Krati Vats**
**II Year M.Sc. (Criminology)**
&
**Dr. Rufus. D**
**Assistant Professor**
Department of Criminology & Police Studies
Sardar Patel University of Police, Security & Criminal Justice
Jodhpur, Rajasthan, India

## Abstract

The advent of technology especially internet related services is very much indispensable for global socio-economic growth. There are numerous advantages in using this technology, but misuse of internet has posed new threats to society in the recent years. In this context, traditional bullying and cyber bullying have to be viewed. The traditional bullying is physical in nature, whereas cyber bullying is virtual. Moreover, cyber bullying is a subset of traditional bullying. Also, cyber bullying has proved the prevalence of repetitious aggression, generally, by an individual perpetrator on his target-victim. In India, the legal provision of the IPC including IPC 354 D and Information Technology Act, 2000 (IT Act) have made the acts of bullying a punishable offence. The observation of reviews on most common cyber bullying victimization clearly indicated that blackmailing and internet trolling are the different forms of cyber bullying, which are currently into existence. This cyber bullying victims are often social media users. This necessitates the need to understand the possibility of relationship between social media usage hours and cyber bullying experiences. Keeping these in view, an online study has been conducted to understand various forms of cyber bullying in two cities of Rajasthan namely Jodhpur and Jaipur, wherein 142 samples are drawn using snowball sampling method. The samples included youngsters pursuing their studies in higher education institutions from Jodhpur and Jaipur. The primary data collection has been conducted online using Google forms. The study has analyzed the relationship between social media usage hours and frequency of cyber bullying experiences, wherein 29.60 percent of the respondents have reported that they experienced cyberbullying before attaining 18 years of age. Interestingly, 54.20 percent of respondents have reported that they have experienced cyber bullying only in the last three years, wherein the mean age is reported as 24 years. Nearly one-fourth of the respondents are not aware of IT Act. There are various inferences drawn from respondents. The suggestions provided in this study can be an eye opener to understand the aspects of cyber bullying victimization faced by youngsters.

# A Conceptual Overview of Modern Approaches in Teaching

**Dr. Gopal. N**
**Assistant Professor**
Department of Education
Vijayanagara Sri Krishnadevaraya University
Ballari, Karnataka, India

## Abstract

The teaching approach is a set of ideologies, beliefs or notions, general principles, pedagogic practices and management strategies used for classroom instruction about the nature of learning that gets translated into the classroom through a way of teaching something, which use classroom activities or practices to help learners to learn. There are some approaches, which are into practice like Task based Teaching, Mental code approach and Aural-oral approaches respectively. However, teaching mainly fall into two categories or approaches teacher-centred and learner-centred. In the modern classroom, learners often learn through techniques drawn from a variety of methods or approaches in what has been labelled as 'eclectic approach'. The teaching technique is a well-defined procedure used to accomplish a specific activity, wherein the teacher selects techniques from various approaches according to the different needs of their learners. Furthermore, the choice of teaching method depends on what fits into educational philosophy, classroom demographic, subject area and school mission statement. Hence, the use of modern approaches in teaching helps to develop the minds of students. This is because the advanced educational approach is student-centric, wherein it subsidizes the students to develop self-learning skills as well as becoming more adoptive in the modern world.

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# An Empirical Investigation of Challenges Faced by Teachers towards Online Teaching During Covid-19

**Dr. Anuradha Sekhri**
**Assistant Professor**
Department of Education
Institute for Development & Communication
Panjab University Research Centre, Chandigarh, India

## Abstract

The technology brought a complete revolution in education. On one hand, it has opened a vast field in front of the educationists with opportunities to enrich their technical knowledge and pedagogy, on the other, it has posed myriad of challenges for the teachers to be as proficient in online teaching as they are in the physical class-rooms, without compromising with the quality aspect of teaching as well as learning. Most of the teachers have to deliver their subjects through online teaching for the first time and / or possesses very little exposure in this direction, prior to pandemic like Covid-19. This necessitates the need to understand the nature of challenges faced by the teachers regarding online teaching, and in what way they confronted the challenges, finding solutions and evolving strategies at each stage of teaching and learning. The study has been conducted on teachers serving at schools and higher education institutions across the country with the onset of Covid-19 lock down. The sample comprised of 186 teachers (81 school teachers and 105 teachers from higher education institutions) from Government, Private, and Government aided institutions across 14 States of India, wherein the samples have been drawn using convenient sampling procedure. The study adopted online survey through a structured questionnaire. The knowledge about e-learning, accessibility to Open Education Resources (OER), and competency in digital tools / apparatus to be used in online teaching have been highlighted as major challenges by 37.63 percent teachers.

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# Women's Invisible Wings: A Panorama into Virginia Woolf's Shakespeare and his Sister

**Mr. Nohin Cherian Binu**
**I Year PG Student**
Department of English
CMS College (Autonomous)
Kottayam, Kerala, India
&
**Ms. Sravya S R**
**I Year PG Student**
Department of English
Christ Nagar College
Trivandrum, Kerala, India

## Abstract

Women has become an inclusive economic growth strategy in the world. The women across the globe in general have contributed more to economic growth, social decision making and possesses resource allocation capacity. This has been witnessed by many developed and developing countries. Also, it indicates women's entrepreneurial attitude and skills. Women have great potential, but they are denied the opportunity to contribute for the benefit of entire human race. The remarkable achievements of women must be viewed alongside the stressful role they are undergoing even in the modern world. The Learning, Labour and Leadership are basic needs in which women as an individual in the nation are denied in name of their Gender. Firstly, learning is the foundation on which any change is built and helps women to help themselves especially so in developing world. Secondly, labour facilitates the women to achieve their true potential. The reason being their economic participation is good for their family and to the country's growth. Thirdly, the aspect of leadership, which drives their energy and places them in the achievement ladder. The present research study will shed light on women's rights, which has been a social issue for years. The researchers intend to discuss on reforms within the traditional convention of portraying women as cry-babies by dwelling into the routes in which women have been struggling to raise their 'invisible wings' across all levels and sectors. Also, this study sketches the relic of chastity that dictated anonymity to women by providing a view into Virginia Woolf's 'Shakespeare and his Sister'. The study highlights the type of culture towards women in Shakespeare's times and brings into light the victims of inner strife as their writings prove with the use of names of a man. Also, suggests that Reformist Feminism will be the approach, which allows women to embrace who they are and / or want to become.

# A Study on Impact of Health Infrastructures on Socio-Economic Development in Selected Sampled Villages in Amri Block of West Karbi Anglong District of Assam, India

**Dr. Kiran Kumari**
**Professor**
&
**Mr. Rasing Hanse**
**Research Scholar**
Department of Geography
Rajiv Gandhi University
Itanagar, Arunachal Pradesh, India

## Abstract

The purpose of health care services is to improve the health status of communities and to deliver quality health services, wherein the availability of health care infrastructure determined status of social development in the area. In the context of Indian Public health System, the first contact point of community is ASHA (Accredited Social Health Activist) as a health service provider at village level as well as assisting trained health workers at higher level too. It is to be noted that in accessing health services in a rural area, huge hindrances come into limelight due to unequal distribution of health institutions, man powers, physical constrain and other socio-political factors. In 2013, Government of India has launched the National Health Mission (NHM) as an umbrella of two schemes i.e., the National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM). The purpose of these schemes is to improve health infrastructure and health outcomes in India's rural and urban areas. It is implemented in the Amri developmental block of West Karbi Anglong District of Assam. The reason being, it consists of dispersed pattern of settlement along with a small size of population, poor means of transport and communication and possesses host of other civil amenities, which poses a serious problem for development of health care sector. Despite bold initiatives taken by the government of India, this block is one of the least accessible to modern quality health care systems. This present research paper aims to highlight the impact of health care infrastructure on socio-economic development in selected sampled villages in Amri Block of West Karbi Anglong district of Assam. The entire study is based on randomly selected 62 sample villages covering 1277 households and secondary data sources. The primary data is collected through fieldwork in selective villages under Amri Block through a structured questionnaire. The study adopted descriptive research design for interpreting the findings. The data so obtained have been processed using statistical analysis and conclusions are drawn accordingly. It has been found that unequal distribution of health infrastructures, disperse pattern of settlement and lack of transport service have strong implication in the study area. The health department in the district as well as the locality should come forward and take a strong decision for establishment of quality and need-based health institution in the area so that regional imbalances shall be removed and social justice will prevail at large.

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# The Marginal Margin – A Conceptual View on Devadasis

**Dr. Suvashree Suvadarshinee**
**Assistant Professor - English**
Department of Basic Sciences & Humanities
Silicon Institute of Technology
Bhubaneswar, Odisha, India

## Abstract

Prostitution has been a taboo of unopened secrets in the world of women. Hence, to portray such characters as prominent protagonist, this conceptual study is an attempt to understand the conflict of time and society. Importantly, under such themes, Devadasi culture is the most unrealistic approach to modern day prostitution. Moreover, it has been shrouded in the realms of religious devotion, this 'temple prostitution' definitely raises questions to comprehend what goes through the stages of such pure, God like intimacy. Although, in modern historiography, such practices are limited to confined places and times; their impact escalates the original intentions of deep-rooted beliefs and traditions in culture. Devadasis are considered as married ones to the deity, wherein these women enjoyed the higher society respect in the earlier centuries. However, the reality and its existence the same in modern day are quite different by the examples, which can be seen in many parts of India and around the world. In India, the girls are generally sold to the temple in the name of belief by their parents to adhere the expenses of family. The low caste, religion, patriarchy and insufferable poverty being the major causes. The attempt to turn liability to asset, takes a turn of extremes. There are families, where this cult runs deep as family lineage making it a nightmare for the girl child. The clandestine closed-door ritual has made the women to be a fallen victim to open trade for sexual exploitation and sustainability for Davadasis. They are living the life with almost no difference or even worse to that of recognized commercial sex workers, wherein the system itself is a huge subject of debate. The Devadasis are deemed as untouchables, being from the lower strata of society. The irony in the fact that, the minor girl is bargained off, being said she is a 'Goddess' herself after her matrimony to God. The immediate question arises in one's mind in this modern culture is that 'Can God be sectioned as untouchable in any culture?'. Keeping these aspects in view, the present research attempts to re-explore the margins set by society over the ages and in modern times for the marginalised community called Devadasis. It is to be noted that being wedded to God, she is untouchable to mortals, yet lives a life of constant physical, mental and economic abuse by society and customs for survival.

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# Psycho-Emotional Aspects of Premenstrual Syndrome – An Exploratory Perspective

**Ms. K. Ramya**
**Doctoral Research Scholar**
Department of Women's Studies
&
**Dr. K. Manimozhi**
**Professor**
Department of Resource Management
&
Controller of Examinations (i/c)
Avinashilingam Institute for Home Science & Higher Education for Women
Coimbatore, Tamil Nadu, India

## Abstract

Premenstrual syndrome (PMS) is one of the challenges that most women experience in their reproductive years. It is also one of the important areas in the context of women workforce development across the densely populated nation like India. Also, women's population across the globe are equal and even slightly higher than men's population. Hence, they gain utmost prominence with regard to national and global economic growth. Several research studies have focused on physiological, hormonal, psychological, psychosomatic, and biopsychosocial approach towards treatment of premenstrual syndrome. Most of the studies conclude that PMS is stress related, wherein stress is a common trigger of premenstrual symptoms. Also, the regulation of emotional affect provides positive effect on women with PMS. Emotions are processed independently of conscious awareness, and it coordinates the mind and body. The connection between emotion and hormonal, emotion and visceral, and emotion and musculoskeletal responses showed that emotions lead to actual physical changes that act as contributors to psychosomatic disorders. The gap analysis conducted by the researchers on various PMS studies has shown lack of inclusion of emotions as a main component in analysing the premenstrual symptoms. Hence, this present study envisages on awareness about stressors, contributors to stressors including societal and familial aspects on women's upbringing, perception about 'self' and womanhood, unresolved emotions, associated behavioural patterns and belief segments embedded both at conscious and unconscious levels of the mind that might lead to aggravation of pre-menstrual disturbances. The study envisages on awareness about stressors and unresolved emotions through dream analysis and interpretation. It suggests exploratory research through administering an integrative approach to provide comprehensive framework for handling and alleviating PMS. The study provides awareness on effect of premenstrual symptoms and women's well-being and its impact on work-life balance to organizations recruiting and inducting women workforces. Moreover, it will facilitate the women trainers and practitioners in organization and corporates to identify and adopt appropriate training modules for women personnel to enhance their work efficiency.

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# Economic Analysis on Production of Major Crops in Haryana

**Mr. Bal Krishan Narwal**
**Assistant Professor (Contractual)**
Department of Economics
Chaudhary Devi Lal University, Sirsa
&
**Mr. Neeraj Kumar**
**Research Scholar**
Department of Management
Guru Jambheshwar University of Science & Technology, Hisar
Haryana, India

## Abstract

Agriculture plays a vital role in economic development as it still contributes 16.7% to State GDP and employees 51% of workforce. Also, for agricultural development central and state governments are strengthening the agricultural research, education and extension as well as ensuring adequate availability of timely irrigation, water supply, etc. Haryana is the second largest contributor of food grains to the Central Pool, whereas about 60% of the total export of basmati rice is contributed by the State alone. Hence, to increase the agricultural production and productivity the inputs of agriculture's supply for growth and development along with dissemination of improved technologies to the farmers and other stakeholders have always been the major concern. The major cropping pattern in the State is wheat, rice bajra, cotton, and Sugarcane. The average productivity of total food grains has reached 35.27q/ha as against 19.2 q/ha at country level. The State enjoys first position in the production of basmati rice and also in productivity of wheat (51.8 q/ha), pearl millet (20.4 q/ha) and rapeseed & mustard (18.8 q/ha). The State has achieved high productivity/production of fish (5,500kg/ha), mushroom (6.07 kg/tray, productivity or 8000 tons production), honey (2500 tons production with 15% growth/annum), fruits (3.5 tons/ha), vegetables (13.42 q/ha), etc. However, the upcoming second-generation have to face problems like depletion of natural resources, decreasing total factor productivity (TFP). According to Haryana State Action Plan on Climate Change (2011) the mean maximum temperature is likely to increase by 1.3ºC and minimum temperature by 2.1ºC by 2050 respectively. The increase in mean maximum temperature is projected to be 4.2ºC and mean minimum temperature 4.7ºC by 2100. Also, the mean annual rainfall is projected to decrease marginally by about 63 mm (3%) by mid century and increase by about 347 mm (17%) by the end of century. The parts of Bhiwani, Faridabad, Fatehabad, Gurgaon, Jhajjar, Jind, Karnal, Kurukshetra, Mahendragarh, Rohtak, Sirsa and Sonipat have showed decreasing trend in the monsoon rainfall. Evaporation transpiration and Green House Gases (GHG) are projected to increase, whereas, negligible changes, in ground water recharge have been anticipated. The present study suggests to focus on adopting the new trends to increase the agriculture produce for regional and national consumption.

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# An Economic Study of Women Entrepreneurs in Tirunelveli District as Stewards of Human Resources for Sustainable Development

**Ms. P. Anici Subha**
**Assistant Professor**
Department of Economics
Sarah Tucker College, Tirunelveli District
&
**Ms. E. Walsa Ebenezer**
**Assistant Professor**
Department of History
Nazareth Margoschis College, Thoothukudi District
Tamil Nadu, India

## Abstract

Entrepreneurship amongst women has been a recent concern across many developing countries. Women have become aware of their existence, rights and work situation. However, women of the middle class are not too eager to alter their role in fear of social backlash. The progress is more visible among upper class families in urban cities. In this context, women entrepreneurship gains importance. The reason being entrepreneurship is the gateway for achieving women empowerment. Moreover, women entrepreneur is a person who accepts the challenging role to meet her personal needs and become economically independent. This research study focuses on Indian women entrepreneurs' identity, role taking and breaking new paths. It is quite important to note that ignoring the contribution of women entrepreneurs in Indian history becomes incomplete. The reason being they have emerged, thrived, survived and sustained all the socio-cultural struggles and performed extensively in upbringing the socio-economic development at large.

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# An Overview on Modern Education with Classical Education

**Ms. Aruna S H**
**Research Scholar**
&
**Dr. Gopal. N**
**Assistant Professor**
Department of Education
Vijayanagara Sri Krishnadevaraya University
Ballari, Karnataka, India

## Abstract

In the present scenario, training-educational process is an active and multifaceted, which involves both classical and modern teaching methods in order to achieve excellent academic performance in the field of education. Even though traditional teaching methods have a formal criteria like interaction between teacher and students i.e., face-to-face and therefore students can give immediate feedback. In this context, classical teaching methods becomes significant from time-to-time. The role of effective learning approach represents the key point for education process. It is to be noted that the role of teachers in evolving creativity to those students who want to learn in and collaborative way is very important because they should imply that students directly in the training-educational process. Moreover, the educational process must be student centred because only in this way their critical thinking and creativity is developed. This can be achieved when non-formal and informal learning is combined with formal learning. In doing so the scope of pedagogy will be accomplished. However, the pedagogy needs to support student's learning effectiveness. The present research study intends to discuss about the aspects with regard to facing the new kind of challenges in educational technology. It has been suggested that the using Web-Based Distance Learning System (WBDLS), wherein on one reading it must embrace and cover all areas of learning viz. play group through higher education, informal learning in the community, home or workplace, training courses in industry, adult education courses, and so on. Furthermore, in the contemporary context education is regarded as a ground breaking concept, which is used to produce performance of student at individual and institutional levels respectively. Also, the education has to support and build approaches to address future challenges in the society. Furthermore, the learning skills are developed through modern teaching and learning strategies based on creativity and interactive learning methods for equipping the student community.

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# A Conceptual View on the Conflict and Clashes of Socio-Cultural and Religious Values in Khushwant Singh's Novel

**Mr. Sunkesula Venkatakrishnaiah**
**Research Scholar (English)**
&
**Dr. V. B. Chitra**
**Professor (English) & Head**
Department of Humanities
JNTUA College of Engineering
Anantapuramu, Andhra Pradesh, India

## Abstract

The novel 'I Shall Not Hear the Nightingale' written by legendary novelist Khushwant Singh explores the clashes and conflicts of upper – middle class family in Punjab during World War II on the basis of social, culture and religious values. The objective of this study is to focus on the state of human psyche, when it is under the sense of conflicts and guilty. This novel starts with the revolutionary creed (the baptism of blood) for driving the British out of India for freedom. It also highlights the situation when Sher Singh was arrested under the charge of suspicious murder, wherein his mother Sabhrai prayed to Guru the entire night within Golden Temple at Amritsar. As result, the police commissioner released her son on the day of Christmas, but she expresses that she never hears the Nightingale's song, which represents the dawn of celebrations on India's Independence Day. This novel ends with a happy-note that 'All is Well Ends Well'. The present study discusses on Khushwant Singh's character depiction in a convincing manner. Also, highlights how these characters are encountered and enlightened by all in their walks of life.

# Quest for Identity in the Selected Novels of Namita Gokhale and Arundhati Roy

**Mr. J S Jehu Raju**
**Research Scholar (English)**
&
**Dr. V. B. Chitra**
**Professor (English) & Head**
Department of Humanities
JNTUA College of Engineering
Anantapuramu, Andhra Pradesh, India

## Abstract

Quest means long and arduous search for something new or an attempt to achieve something difficult. Identity is the quality, belief that make a particular person different from others. Every individual has a unique personality in terms of their psyche, heritage, parentage, wishes and dreams. It is important to note that everyone has an identity based on attitude and character. This research paper explores quest for identity in the characters of Namita Gokhale's 'Paro: Dreams of Passion' and Arundhati Roy's 'The Ministry of Utmost Happiness'. Namita Gokhale reconstructs women as individuals free from conventional motifs and social decrees. Also, explains their repressed agony and unreleased stress of female characters, which lead them to pursue their identity. In her novel 'Paro: Dreams of Passion', most of the characters search for their identity to realize their inner shortcomings, capabilities and desires, but their identity remains un fulfilled as a result of their choosing of wrong paths. Interestingly, in the novel 'The Ministry of Utmost Happiness', Arundhati Roy portrays Anjum, a transgender women and former sex worker by navigating through gender identity particularly, trans identity in a positive and subtle light. Moreover, Anjum's identity as Hijra grants her sometimes a protective social status. This is true in the incident of Muslim massacre by Hindu terrorists, wherein she has been spared considering killing Hijras bring bad luck. Another Hijra Nimmo relates the conflict (the war inside of a Hijra) between masculine and feminine genders with the conflict between two new countries of India and Pakistan. This analogy is interesting because throughout the novel India-Pakistan conflict is portrayed as a senseless violence, a war between two people who had forgotten that they have been once neighbours. In furtherance, the character Anjum seems to embrace that both genders live within her and she defies gender binary. Also, Anjum embodies the concept of co-existence within her by portraying this as a special and sacred identity. Thus, Roy in her novel demonstrates that power comes from embracing differences rather than destroying it.

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# Human Resource Development of Rural Youths: A Study on Role of Nehru Yuva Kendra Sangathan in Tripura State

**Mr. Jiaul Islam Chowdhury**
**Research Scholar**
Department of Social Work
Assam University
Silchar, Assam, India

## Abstract

Human Resource Development (HRD) is one of the important concepts of development. The notion development is nothing but the promotion of individual capabilities. These capabilities are the pre-requisites to do various activities efficiently and effectively. The HRD has got a pertinent role in the whole process of development. It can be defined as a process through which people are helped in a continuous and planned manner based on assessed capabilities, to develop, acquire or sharpen capabilities, and increase competency with commitment, to prove the effectiveness in comparison with others, in order to perform various general functions as an individual and social being & specific functions associated with the job at present and future. It is important to note that more than 70% of Indian population are living in rural areas out of which rural youth (15-29 age groups) constitute approximately 30%. Hence, these rural youths become the priority sector for any HRD intervention. India is fortunate to have a large resource of youth population, which is vigorous, active and responsive to new ideas and changes. The task is how to identify their capacity? how to increase their capability? and how to make them competent? etc. This can be achieved only through the efforts of Governmental and Non-Governmental agencies so as to excel their capacities within the country. In this context, Nehru Yuva Kendra Sangathan (NYKS), an autonomous organization under the Ministry of Youth Affairs and Sports, Government of India gains importance. It is a youth development agency, which works with rural voluntary agencies and youths, whereas it affiliates with many youth organizations and societies. Moreover, through these affiliated organizations it works for the overall development of non-student rural youths. The operation of NYKS has been started in 1972 and playing a vital role in shaping the mind set of young people (rural youths) in nation building and human resource development. The researcher attempted to explore the aspects pertaining to HRD of rural youths in accordance with the role of NYKS in Tripura State.

# The Concept of World in Mahabharata: A Philosophical Overview

**Mr. Subhankar Mandal**
**Assistant Professor**
Department of Philosophy
Rammohan College, Kolkata
&
**Ms. Amrita Mandal Mukherjee**
Former Part-Time Teacher
Department of Philosophy
Sudhir Ranjan Lahiri Mahavidyalaya, Nadia
West Bengal, India

## Abstract

Mahabharata is one of the scriptures, which states that everything in the world is impermanent. Hence, anything created in this world is subjected to destruction. Moreover, it states that nothing in this world is eternal, so it is not proper to mourn for it. The worldly human beings always think about state of permanence due to act of ignorance and that is the reason why ignorant people mourn, but learned scholars are aware of the true nature of this materialistic world, so they do not grieve. In the Mahabharata, five Mahabhutas are recognized, which are elements of the world viz. earth, water, fire, air and ether are five elements and are referred to as Panchabhuta. These five elements are impermanent according to Mahabharata and it also accepted the five senses organ, the five-motor organ and the mind, these eleven organs. The doctrines mentioned in Mahabharata concerning about the functioning of senses are not contradictory to logical conclusions, but are consistent with them. It is important to note that in Mahabharata each demon has been characterized according to its deeds. The Mahabharata states that earth has these five qualities of sound, touch, rupa, taste and smell. In this context, Water contains sound, touch, rupa and rasa; Fire has sound, touches and rupa or sharp; Sound and touch quality from the air. Interestingly, there is only one quality in the ether - the sound. All those smells are earthly. There are ten types of gandhas, six types of rasas, twelve types of colours, eleven types of touches and ten types of sounds. In Mahabharata, Soul or Parameswar is acknowledged as the only eternal, because it is against the Veda to accept any eternal substance as mentioned in Vaisesika Philosophy. Furthermore, twenty-six theories have been accepted in review of the world in Mahabharata Samkhya philosophy, which mentions the highest level is Paremeswar or Bramha followed by second level is Purusha or Self and third is Prakriti. Also, mentions this world is impermanent and comes from Prakriti, wherein this Prakriti is called Pradhan. Moreover, there is no causal relationship between some of these theories. The understanding is that ‘Mahat’ is the first product of Prakriti and Ahangkar is second product of Mahat. The Ahankara has four kinds of minds, five sense organs, five motor organs and five tanmantras or mahavutas. The present study has attempted a philosophical overview on Mahabharata. The observation is Mahabharata states the impermanence of this world and also exhibits that it originates from the eternal Parabrahma or Parameswar.

# Use of Calques and Unreliable Narrative to Subvert Historical Discourse – A Conceptual Study on Amitav Ghosh's Novel

**Ms. Ruchika Taskeen Kerketta**
**PhD Research Scholar**
Department of English
Ranchi University
Ranchi, Jharkhand, India

## Abstract

The legendary Amitav Ghosh's novel named 'Gun Island' has gained prominence because the novel's narrative has been scattered throughout the map of Europe and even Africa also has its origin in India – the Sunderbans and places of West Bengal and Bangladesh that are drained by the mighty Raimangal River. This shows the novelist's intrinsic inclination towards subverting historical discourse, not as dictated by the dominant centre, but as known and lived by the marginalized subalterns. However, the tale of Gun Merchant is entirely based on folklore and mythical figures, wherein one can never truly ascertain the credibility of the facts, without a willing suspension of disbelief. The finest example of unreliable narrative in this novel explained at the end, wherein Deen and Cinta finally surmise that the humble figure of Bengali folklore has been in fact a prolific merchant of good standing, travelling from Calcutta to Venice. This has been identified in one of the verses about the Gun Merchant as 'a city of the world', to the places identified in the plot as Taal Misir Desh, Rumali Desh, Shikol Dweep and Bonduk Dwip, whereas each of these islands and/or cities hold epistemological significance in the narrative and are associated with being centers of trade and commerce at a time in history. Also, it is usually associated with civilized European dominance upon rest of the savage world; what with the Dutch, the Portuguese and even the Italians and Persians finding their way to various parts of the Indian subcontinent in order to fulfill their economic as well as cultural requirements. The 'Calques' usually refer to loan words or phrases from another language translated literally, are the key to unlocking the mystery that is 'Bonduki Sadagar'. Furthermore, it has been later discovered that the old Arabic name for Venice is 'Al-Bunduquevya', which is also the name for guns, or 'Banduk', known as rifles in English. Thus, this novel intends to bring in the narrator and reader to the conclusion that 'Bonduki Sadagar' in reality means the Merchant who went to Venice. In doing so, Ghosh turns the entire historical discourse on its head by bringing to light that it was not Europe, but the Indian subcontinent and Asia, which have been the fulcrum of contemporary civilization. The present conceptual study attempts to understand the use of calques and unreliable narrative in Amitav Ghosh's novel 'Gun Island' to subvert the historical discourse over years.

# A Study on RTI Act and its Relevance to Media Organizations in Odisha

**Mr. Tikayat Nayak**
**Research Scholar**
Department of Journalism & Mass Communication
Utkal University, Bhubaneswar
&
**Dr. Pravat Kumar Dash**
**Assistant Professor**
Department of Political Science
KBDAV College (Utkal University), Khordha
&
**Dr. Bandita Kumari Panda**
**Associate Professor**
Department of Journalism & Mass Communication
Berhampur University, Berhampur
Odisha, India

## Abstract

Today, Right to Information (RTI) is very much important for the media sector. Now-a-days it is very difficult to access the official information for investigative, analytical and popular journalism. The bureaucracy, police, judiciary and legislature have been keeping the information very secretly. It has been observed that only few journalists are able to get the information breaking the iron curtain of official non-cooperation. Also, it encourages the journalists and common people to ask questions about their rights and privileges. A pressman can contribute to ensure clarity in public, professional, social and personal spheres by getting information through RTI Act. The main intention of RTI Act is to get information and help citizens of the country to promote accountability from public authority. It also enables the media to expose maladministration, corruption, inefficiency and other instances relating to accountability, transparency, effective administration and good governance. The present research study intends to find the relevance of RTI Act with media organizations. Also, it analysed the importance to RTI Act given by media organizations for the public awareness. Keeping these aforementioned aspects in view, the study included journalists from print, electronic and social media from Bhubaneswar as samples, wherein 50 samples are drawn out of definite universe of 100 using snowball sampling. The entire study has been conducted through survey method through questionnaire comprise of close-ended questions. The researchers have found some interesting facts, which contribute largely to the practitioners engaged in media organization. It has been observed that after serving many years in media houses, they require fresh knowledge about RTI Act for proper reporting. Moreover, RTI Act as a greater relevance with media organization, wherein different media are popularizing and promoting it for public awareness.

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