



The Autonomous & Heritage Institution
KANYA MAHA VIDYALAYA, JALANDHAR

College with Potential for Excellence

Re-Accredited A (score 3.56) by UGC-NAAC

Star Status by DBT

4 Stars to KMV IIC by MIC, Government of India

CURIE & FIST Grant (Phase II) Awarded by DST





Accessibility of the Web Series through the OTT Platform in India (A Study of the Teenagers of Talaspur and Deosaini Villages in Aligarh District of UP)

Kritika Sharma¹, Dr Pallavi Mishra², Mansi Singh³, Baljit Singh⁴, Anand Barik⁵, Aakash Modi⁶

¹Research Scholar, Amity School of Communication, Amity University, Rajasthan

²Associate Professor, Amity School of Communication, Amity University, Rajasthan

³Assistant Professor, Dept. of Animation & Multimedia, GNA University, Phagwara, Punjab.

⁴Assistant Professor, HOD, Dept of Animation, KMV College, Jalandhar, Punjab

⁵Assistant Professor, Dept. of Animation & Multimedia, GNA University, Phagwara, Punjab.

⁶Research Scholar, Amity School of Communication, Amity University Rajasthan.

Abstract

The inevitability of change is accepted universally, and like other things and trends in the world, the tastes and interests of the people, as well as trends of entertainment, have undergone much change. Everyone needs entertainment to stay refreshed, creative, dynamic, and enthusiastic. The contemporary scenario speaks of a revolutionary change in entertainment in rural India brought about by android phones and the Internet.

At all stages of life, entertainment is required, but it is required most in the teenage which is a transitional phase between adolescence and youth. All romantic at heart, the teenagers, irrespective of their urban or rural nativity, adopt several means of entertainment that can help them see their imaginations through certain things like novels, television, etc.

The twenty-first century has brought an inexhaustible stock of entertainment to teenagers and others. Now the days are almost over when people would spend much time seeking their fancies and imaginations in the characters and situations portrayed in stories, novels, and films. These days the android phone is within reach of all, including rural teenagers, and they prefer using the android phone to television to amuse and entertain themselves through films and web series. Currently, the OTT platform is a wide platform of entertainment for teenagers, allowing them to watch any movie or web series at their convenience to enjoy privacy and nurture individual interests.

The research paper deals with the excessive preference of the teenagers of Talaspur and Deosaini Villages in the Aligarh District of UP for OTT platforms to other means of recreation.

Keywords: OTT, Web Series, Platform, Entertainment, Teenagers

Introduction

The acronym OTT which is globally setting new milestones every hour stands for the 'Over The Top' platform for watching videos made and released for various purposes, online streaming TV shows, movies, and web series. OTT refers to any online streaming service that delivers various types of content for viewers over 18 years over the Internet. OTT regulation policies do not



Biotechnology and Applied Biochemistry

ORIGINAL ARTICLE

Purification and characterization of a high molecular weight serine protease from *Microbacterium paraoxydans* sp. SKS10

Sandeep Kaur Saggu, Renu Bala, Rachna Hora, Prakash Chandra Mishra 

First published: 14 May 2023 | <https://doi.org/10.1002/bab.2472>

Present address:

Sandeep Kaur Saggu, Kanya Maha Vidyalaya, Jalandhar, Punjab, India,

Associate Editor: Dr. Loredano Pollegioni.

[Read the full text >](#)



PDF



TOOLS



SHARE

Abstract

Alkaline proteases from microbial sources have been found suitable for diverse industrial applications, with serine proteases being the most common enzymes used in the detergent industry. In the present study, we have purified and characterized an extracellular alkaline serine protease from *Microbacterium paraoxydans* sp. SKS10. The protease was purified using ammonium sulfate precipitation followed by different chromatography techniques (fold purification 6.919). K_m and V_{max} for the protease were determined to be 0.183 mg/mL and 4.904 U/mL, respectively. This enzyme is a thermostable high molecular weight (~109.4 kDa) protease which has maximal activity at 60°C, and above pH 10. Inhibitor assays revealed the enzyme to be a serine protease whose activity increased by 2.5-fold in the presence of EDTA. This enzyme remained active in the presence of various metal salts and organic solvents and was compatible with commercially available laundry detergents highlighting its potential for use in the detergent industry.

CONFLICT OF INTEREST STATEMENT

No potential conflict of interest was reported by the authors.



Review

Myxobacteria: Biology and bioactive secondary metabolites

[Sandeep Kaur Saggu](#)^a [✉](#), [Amar Nath](#)^b [✉](#), [Shiv Kumar](#)^c [👤](#) [✉](#)

^a Department of Biotechnology, Kanya Maha Vidyalaya, Jalandhar, Punjab, India – 144004

^b University Centre of Excellence in Research, Baba Farid University of Health Sciences, Faridkot, Punjab (India)-151203

^c Guru Gobind Singh Medical College, Baba Farid University of Health Sciences, Faridkot, Punjab (India)-151203

Received 19 January 2023, Revised 22 April 2023, Accepted 4 May 2023, Available online 9 May 2023.

Show less [^](#)

[+](#) Add to Mendeley [🔗](#) Share [🗣️](#) Cite

<https://doi.org/10.1016/j.resmic.2023.104079> [↗](#)

[Get rights and content](#) [↗](#)

Abstract

Myxobacteria are Gram-negative eubacteria and they thrive in a variety of habitats including soil rich in organic matter, rotting wood, animal dung and marine environment. Myxobacteria are a promising source of new compounds associated with diverse bioactive spectrum and unique mode of action. The genome information of myxobacteria has revealed many orphan biosynthetic pathways indicating that these bacteria can be the source of several novel natural products. In this review, we highlight the biology of myxobacteria with emphasis on their habitat, life cycle, isolation methods and enlist all the bioactive secondary metabolites purified till date and their mode of action.



Contents lists available at ScienceDirect

Microbiological Research

journal homepage: www.elsevier.com/locate/micres

Reconditioning of plant metabolism by arbuscular mycorrhizal networks in cadmium contaminated soils: Recent perspectives

Harmanjit Kaur^{a,*}, Tashima^b, Sandeep Singh^c, Pankaj Kumar^{d,*}

^a Department of Botany, University of Allahabad, Prayagraj 211002, Uttar Pradesh, India.

^b Department of Botany, Akal University, Talwandi Sabo, Bathinda, Punjab 151302, India

^c Department of Botany, Kanya Maha Vidyalaya, Jalandhar, Punjab 144004, India

^d Department of Microbiology, Dolphin (PG) Institute of Biomedical and Natural Sciences, Mandwaia, Dehradun, Uttarakhand 248007, India

ARTICLE INFO

Keywords:

Cadmium
Glutathione
Glomalin
Metallothioneins
Phytochelatin

ABSTRACT

Cadmium (Cd) is one of the most perilous nonessential heavy metal for plants, owing to its high water solubility and obstruction with various physiological and biochemical processes. It enters food chain via plant uptake from contaminated soil, posing a grave menace to ecosystem and mankind. Green remediation comprises approaches intended at prudent use of natural resources for increasing profits to humans and environment. Arbuscular mycorrhizal (AM) fungi are considered a promising green technological tool for remedial of Cd-polluted soils. They are naturally associated with root system of plants in Cd-contaminated soils, evidencing their tolerance to Cd. AM can decrease Cd uptake by plants broadly through two strategies: (1) extracellular mechanisms involving Cd chelation by root exudates, binding to fungal cell wall/structures or to the glycoprotein glomalin; (2) intracellular means involving transfer via hyphal network, detoxification and vacuolar sequestration mediated by complexation of Cd with glutathione (GSH), phytochelatin (PCs), metallothioneins (MTs) and polyphosphate granules. Additionally, mycorrhizal symbiosis facilitates reconditioning of plants' metabolism primarily through dilution effect, increased water and mineral uptake. Recently, AM-induced remodelling of root cell wall synthesis has been reported to improve plant vigor and survival under Cd stressed environments. The present article highlights Cd impacts on AM growth, its diversity in Cd contaminated soils, and variations among diverse AM fungal species for imparting plant Cd tolerance. The most recent perspectives on AM-mediated Cd tolerance mechanisms in plants, including cellular and molecular studies have also been reviewed for successful utilization of these beneficial microbes in sustainable agriculture.

1. Introduction

Contamination of soil ecosystems with heavy metals is increasing at a startling pace, and is a key topic of concern worldwide. Technogenic developments, for example expanding urbanization and increasing industrialization, specifically in the second half of the 20th century, have augmented the heavy metal levels in farming soils (Yang et al., 2018), resulting in severe ecological and health problems. These farcical exercises have resulted in devastation owing to non-biodegradable, persistent, and recalcitrant character of heavy metals in the environment. Cadmium (Cd) is a naturally found heavy metal in the earth's outer layer, present in divalent state (Cd^{2+}) as well as Cd-chelates in the soil solution (Abedi and Mojiri, 2020). It is a widespread, redundant, destructive, most perilous and non-essential trace metal in the soils

which is effortlessly absorbed by plant roots and translocated to aerial parts (Kubier et al., 2019). Elevation in Cd mobility at the soil-plant border line easily facilitates its access into the food chain that causes life-threatening problems to the health of animals and humans (Hussain et al., 2021a). Human-based actions, for instance dumping of urban garbage, mining, smelting, combustion discharge, land filling, sewage sludge, plastic stabilization, paints, and use of synthetic phosphate fertilizers have increased the level of Cd in the terrestrial environments (Bojorquez et al., 2016). In soils, Cd concentrations of 0.01–1 mg kg⁻¹, with a universal mean of 0.36 mg kg⁻¹ have been reported (Kubier et al., 2019). Cd produces various morphological, structural, physiological and biochemical changes in plants, ultimately reducing the yield and causing phytotoxicity (Raza et al., 2020; Hussain et al., 2021b).

In recent decades, numerous approaches have been implemented by

* Corresponding authors.

E-mail addresses: harmanjitgarcha@yahoo.com, harmanjitkaur@allduniv.ac.in (H. Kaur), guptapankaj23@gmail.com (P. Kumar).



Facile Fabrication and Characterization of Novel Sterculia Gum-graft-poly(n-isopropylacrylamide-co-acrylamide) Hydrogel for Efficient Removal of Cationic Dyes from Aqueous Solution

Sharma Nisha¹, Tank Sinderpal Kabalsingh^{2,3,*}

Abstract

Water is indispensable component of life. Contamination of water is a severe problem that affects human health, aquatic vegetation, and fauna. Aside from various effluents, a variety of cationic dyes generated by industrial effluents contributes significantly to water contamination. In this study, a sterculia gum graft-poly(n-isopropylacrylamide-co-acrylamide) hydrogel was made using a graft copolymerization technique with *N,N'*-methylene-bis-acrylamide as a crosslinker, ammonium persulphate as an initiator, and tetramethylethylenediamine as an accelerator to enrich cationic dyes from aqueous solution. SEM, FTIR, TGA, and swelling experiments were used to characterize the final hydrogel. SEM images show a thick surface with uneven pores and craters, indicating that the grafting and hydrogel production were successful. The hydrogel swelled pH-dependently, with a maximum swelling of 10.88 g/g at pH 9.2 and a minimum of 7.91 g/g at pH 4. The effectiveness of a sterculia gum graft-poly(n-isopropylacrylamide-co-acrylamide) hydrogel for removing the cationic dyes, methylene blue, malachite green, and crystal violet has been thoroughly investigated. The influence of feed dye concentration, solution pH, adsorbent dose, contact time and reaction temperature was experimentally examined. The maximal adsorption capacities for methylene blue (MB), malachite green (MG), and crystal violet (CV) were 17.885, 18.031, and 16.995 mg/g, respectively, at pH 7 and 35°C, according to the Temkin isotherm model. The dye adsorption occurred in a regulated mode through less Fickian mechanism and obeyed pseudo-first-order kinetic model. In addition, following three adsorption-desorption cycles, the adsorbent showed high reusability. As a result, the sterculia gum graft-poly(n-isopropylacrylamide-co-acrylamide) hydrogel may be used to purify water and remove cationic dyes from aqueous solution effectively.

Keywords: Sterculia gum, polymer gel, smart polymer, swelling kinetic, cationic dyes, recycling

*Author for Correspondence
Tank Sinderpal Kabalsingh
E-mail: tanksinderpal@gmail.com

¹Associate Professor, Department of Physical Sciences, Sant Baba Bhag Singh University, (Jalandhar) Punjab, India
²Research Scholar, Department of Physical Sciences, Sant Baba Bhag Singh University, (Jalandhar) Punjab, India
³Assistant Professor, Department of Chemistry, Kanya Maha Vidyalaya, (Jalandhar) Punjab, India

Received Date: April 22, 2022
Accepted Date: June 20, 2022
Published Date: August 12, 2022

Citation: Sharma Nisha, Tank Sinderpal Kabalsingh. Facile Fabrication and Characterization of Novel Sterculia Gum-graft-poly(n-isopropylacrylamide-co-acrylamide) Hydrogel for Efficient Removal of Cationic Dyes from Aqueous Solution. *Journal of Polymer & Composites*, 2022; 10(2): 29–59p.

INTRODUCTION

The world is currently experiencing a water crisis as a result of the indiscriminate use of water resources beyond their regeneration limits coupled with daily generation of massive amounts of wastewater. The majority of effluents in contaminated water contains hazardous substances such as heavy metal ions, dyes, and organic contaminants, which are non-biodegradable and harm exposed organisms and marine life. Hazardous effluents from the textile industry are one of the most significant sources of untreated water pollutants discharged into bodies of water.



Adsorptive removal of malachite green using ferromagnetic sterculia gum – graft-poly(n-isopropylacrylamide-co-acrylamide)/magnetite nanocomposite

S K Tank^{1,2} & N Sharma^{1*}

¹Department of Physical Sciences, Sant Baba Bhag Singh University, Jalandhar, Punjab 144 030, India

²Department of Chemistry, Kanya Maha Vidyalaya, Jalandhar, Punjab 144 001, India

*E-mail: nishi.hpu@gmail.com

Received 7 August 2022; accepted 3 April 2023

In present scenario, anthropogenic activities have degraded the quality of water bodies to an unbearable level. Discharge of untreated industrial and other effluents have made the water unconsumable. Present work is an attempt to fabricate new stimuli responsive adsorbent based on natural exudate gum sterculia, an indigenous natural gum for uptake of a cationic dye malachite green. Magnetic field responsive sterculia gum-graft-poly(n-isopropylacrylamide-co-acrylamide) nanocomposite have been prepared and assessed it as adsorbents for enrichment of malachite green from aqueous solution. The nanocomposite is characterized by FTIR, TG-DTA, VSM and swelling studies. The VSM results have shown is superparamagnetic behaviour of nanocomposite with saturation magnetization of 1.5065 emu/g. The adsorption follows Temkin isotherm and results indicate maximum adsorption capacity of 19.977 (98.78%) malachite green. The desorption studies demonstrates excellent recovery ability of nanocomposite. The adsorption study confirms the prospective applications of polysaccharide based magnetic hydrogel for the fruitful and greener disposal of cationic dyes.

Keywords: Adsorption, Ferromagnetic, Magnetite, Malachite green, Recycling, Sterculia gum

Technological advancement has led to the growth of various industries like paper, cosmetics, printing, textile, plastic, pharmaceutical and food that make generous use of dyes. Effluents released from these industries are loaded with dyes that are highly soluble in water and toxic with lower degradation ability^{1,2}. Additionally these dyes being synthetic, carcinogenic and mutagenic in nature have alarming threats to the human health as well as to the aquatic biota thereby disturbing the ecological balance^{3,4}. Hence, the treatment of these precarious dyes is vital area of research.

Malachite green consists of a macrocyclic ring, an N-methylated diaminotriphenylmethane and employed for dyeing fabrics, paper and leather. It is also used as a biological stain and as an anti-fungal agent in aquaculture⁵. However the dye affect human immune system and has carcinogenic, mutagenic, teratogenic behaviour, chromosomal fracture ability, and respiratory toxicity^{6,7}.

From time to time different conventional methods namely ion exchange, biodegradation, coagulation-flocculation, adsorption, oxidation, photocatalysis and separation using membrane are reported for the degradation of dyes^{8,9}. Amongst these methods, adsorption is extensively employed techniques on

account of its high potency, inexpensiveness, facile handling, regeneration ability and environment friendly nature¹⁰. Classical adsorbents such as silica gel, activated charcoal, zeolites etc. show outstanding adsorption capacity for the enrichment of organic dyes. But high prices, lower efficiency and difficult recycling make it impossible to cater the increasing demand of water purification processes. Hence, to develop effective and viable adsorbents for controlling and removing various organic dyes from polluted water is the need of the hour. Polymeric hydrogels especially chemically functionalized hydrogels have revolutionized the dye enrichment strategies. Due to uncontrolled water pollution, and the rising demand to acquire better selectivity, stimuli responsiveness and efficient reusability, more efficient adsorbents are desirable.

In recent years, contemporary research trend focuses on the development of nanosized adsorbent having large surface area that plays pioneering role in facile adsorption. Magnetic nanocomposites using polymer such as alginate, dextrin, gum Arabic, gum xanthan, etc. has been synthesized and successfully employed for enrichment of dye and toxic metal ions from the aqueous solutions¹¹⁻¹³. Iron oxide magnetic

**ARE WOMEN ENTREPRENEURS AWARE OF GOVERNMENT AND NON-
GOVERNMENT SCHEMES? -A STUDY OF WOMEN ENTREPRENEURS OF PUNJAB**

Dr. Rashmi Sharma

Associate Professor, PG Department of Commerce & Business Administration, Kanya Maha
Vidyalaya, Jalandhar (Punjab), India

ABSTRACT

Numerous programmes and schemes have been initiated by both Central and State Governments for the growth and development of women entrepreneurs. The effectiveness of any programme or scheme depends on how far the target group has been reached. The hard fact is that these schemes are not being used adequately by women entrepreneurs. The non-utilisation of these schemes may be attributed to a low level of awareness of women entrepreneurs about these schemes. This paper examines the various government and non-government policies and programmes formulated at the national and state level for the growth of women entrepreneurs. It also highlights the level of awareness and usage of these policies and programmes by women entrepreneurs of Punjab. The present paper is based on the most popular schemes initiated by government and non-government organisations to encourage women entrepreneurs to take up business activity. The data has been collected by administering the questionnaire on 130 women entrepreneurs, selected randomly from four major cities of Punjab viz, Ludhiana, Amritsar, Jalandhar, and Patiala. Data analysis has been done by applying Wilcoxon signed-rank test and one-sample t-test.

Keywords: women entrepreneurs, awareness, government policies, government schemes, non-government organisations.

INTRODUCTION

Involvement in entrepreneurial activities makes women realise their potential and empowers them, boosts self-esteem, enhances the sense of accomplishment and positively affects the attitudes and perspectives of society. It also enables policy makers to address the requirements of programmes and policies that promote women entrepreneurship, while also keeping track of the larger social and economic parameters.

The Indian Government, in recent years has introduced numerous policies and programmes which are aimed at supporting start-ups and growing the entrepreneurial culture among women. Government promotes the growth of entrepreneurship through policies and programmes which improve entrepreneurial prospects for women. The ultimate challenge before government is to create such policies and programmes that actually encourage women to take up entrepreneurial activities and help them to grow. It is easy to start a new business, but it is challenging to grow it successfully. The emphasis should not simply be to promote new start-ups, but to foster viable, growth-orientated, and creative firms. A holistic approach is required to ensure the success of women entrepreneurship. To foster the culture of women entrepreneurship, government and non-government organisations (NGOs) can play a vital role. Suitable programmes will help in cultivating and promoting successful women entrepreneurship.

LITERATURE REVIEW

Many studies have identified that lack of awareness regarding government support is one of the major reasons for slackness in the growth of women entrepreneurship. It highlights the need of disseminating proper information about the accessibility and workability of government policies, programmes and



A LITERATURE REVIEW ON MOTIVATIONS AND BARRIERS TO INNOVATION IN WOMEN ENTERPRISES IN SERVICE INDUSTRY IN INDIA

Rashmi Sharma

Associate Professor, PG Department of Commerce & Business Administration, Kanya Maha Vidyalaya, Jalandhar (Punjab), India

The scholar Dr. Rashmi Sharma is the awardee of ICSSR Major Research Project. This paper is largely an outcome of the Major Research Project entitled "Dynamics of Innovation Culture Among Women Entrepreneurs in Low Tech Service Industry in Punjab" sponsored by the Indian Council of Social Science Research (ICSSR). However, the responsibility for the facts stated, opinions expressed, and the conclusions drawn is entirely that of the author.

ABSTRACT

The aim of the research paper is to present the literature review of the highly cited research studies dedicated to the entrepreneurship and innovation and published between 2002 and 2022 in the scientific journals belonging to the Social Science Citation Index, Entrepreneurship Journals and Google Scholar. Review was focused on theoretical papers dealing with innovation culture, motivators and drivers of innovation and barriers to innovation in women enterprises operating in services sector and concludes that there are multiple dimensions to innovation in women-led enterprises, giving suggestions for future research.

KEYWORDS: entrepreneurship, innovation, motivators, barriers, literature review

INTRODUCTION

Entrepreneurship and Innovation are considered to be crucial drivers of economic growth and development and of growing technological changes. The pursuit of innovative business practices and entrepreneurial efforts are strongly intertwined with each other. Without infusing innovation into their operations, entrepreneurs cannot maintain a competitive advantage in the market. The topic of innovation in service firms is crucial for entrepreneurs and policymakers alike. Research on innovation has mostly ignored the service sector despite its vital role to the economy. It is important to have a comprehensive understanding of the latest insights into innovation in service firms. There is little fact-based information about perspectives and practices in regard to innovation in services in women-owned businesses. In addition, considerable research on innovation has been on high-tech industries, which are driven by males. However, it is a commonly held belief that traditional and service-related industries, in which women are more prevalent, also have the potential to be innovative.

OBJECTIVES OF THE STUDY

1. To examine the available empirical literature on various motivators and drivers of innovation in women enterprises in service industry in India.
2. To study the available empirical literature on nature of barriers to innovation in women enterprises in service industry in India.

REVIEW OF PAST LITERATURE

There is a vast scope of research in the field of innovation and entrepreneurship. 67 articles were deeply studied and 26 articles were finally selected on the basis of quality of research, relevance of research objectives, scope of research and findings of research. The selected research papers are classified into two broad categories:

1. Motivators of innovation in women enterprises in service industry in India.

IMPACT OF CORPORATE CHARACTERISTICS ON SOCIAL PERFORMANCE OF TOP INDIAN COMPANIES: AN EMPIRICAL STUDY

Rashmi Bindra

Research Scholar, I.K. Gujral Punjab Technical University, Kapurthala, Punjab & Assistant Professor, Kanya Maha Vidyalaya, Jalandhar, Punjab

Dr. Sukhdev Singh

Dean, Business Studies & Research, Gulzar Group of Institutes, Khanna, Ludhiana & Formerly Professor & Head, Guru Nanak Dev Engineering College, Ludhiana, Punjab

ABSTRACT

Every organization whether big, medium or small is indulging in social performance in one form or the other. The corporate characteristics such as age of the firm, size, profitability and leverage are some of the underlying factors that may or may not have an impact on social performance of the companies. In this paper, an attempt has been made to find out the impact of corporate characteristics on the social performance of top Indian companies and a sample of top 10 Indian companies has been taken on the basis of highest market capitalization. Through the application of Panel Regression Analysis, it has been observed that profitability has a significant negative impact on social performance and age has a positive impact on social performance of Indian companies whereas, size and leverage have no impact on social performance.

KEYWORDS: CSR, Social Performance, ROA, Profitability, Leverage

INTRODUCTION

CSR is the most discussed and popular topic in the corporate world. The focus of organizations has undergone a paradigm shift from shareholders to stakeholders. In today's competitive business world, the success and failure of a business organization depends upon the satisfaction of stakeholders—shareholders, consumers, suppliers, employees, labour unions, regulators, analysts etc. Business Organizations are trying to indulge in various aspects of social performance like education, health, community development, environment, product safety, energy conservation etc. Every organization whether big, medium or small is incorporating social performance as part and parcel of its activities. It is observed that characteristics of the company play an important role to decide the magnitude of social performance of corporate houses. Corporate characteristics namely, size of the firm, age, profitability and leverage are some of the aspects that may or may not affect the social performance of corporates all across the globe. In this paper, an attempt has been made to find out whether corporate characteristics such as size of the firm, age of the firm, profitability and leverage have an impact on social performance of top Indian companies or not.

THE REVIEW OF LITERATURE

Galbreath (2010) proved that the firms actively involved in CSR activities earn varied benefits. A study was conducted on a sample of 280 Australian firms from manufacturing and services industry and the first finding was that CSR is negatively associated with employee turnover which implies that good social performance helps to retain employees and the turnover rate gets reduced. Secondly, CSR is positively associated with customer satisfaction as customers get attracted towards firms with better CSR performance and gain a sense of satisfaction. Last, CSR exhibits a positive relationship with firm reputation as goodwill of a firm enhances due to contribution in society.

Gamerschlag et al. (2011) in their paper entitled "Determinants of voluntary CSR disclosure: empirical evidence from Germany" constructed a CSR disclosure index based on the Global Reporting



INTERNATIONAL JOURNAL OF CURRENT SCIENCE (IJCSPUB)

An International Open Access, Peer-reviewed, Refereed Journal

Soft Skills for Employability of College Students in India

Prachi Tiwari

(Research Scholar, Bandelkhand University, Jhansi Uttar Pradesh)

Dr. Abhilash Srivastava

(H.O.D. Commerce, Attara PG College, Attara, Uttar Pradesh)

Abstract

The education is the fourth need of individuals after food, shelter and clothing. It is a key tool for social transformation as well as economic empowerment. The various studies indicate that India will be a country of young people by 2025. The youths are the growth engines for any national economy. The success and future of any nation is defined by the productive workforce. Since the world economy has become a knowledge-based, all-inclusive economy, the demand for skills has increased more than ever. The Government of India has set up a separate 'skills ministry' recognizing the future demand. 'The National Policy of Education 2020' also underlined the growing importance of skills. There are two types of skills: soft skills and hard skills. The hard skills are generally technical skills which can be learnt after completion of a particular course. However, soft skills are typically behavioral and language related skills. The soft skills are important not only for the company but also for other customer relationship management, organizational effectiveness, better team performance, dealing with complex problems and fostering the culture of creativity and innovation at the workplace. The various industry surveys indicate that communication skills, teamwork, problem solving, stress management and creative thinking are among the top ten badly required skills in India. The present study aims how soft skills development can contribute in increasing the employability opportunities of college and university students in India. The study is unique and significant as it deals with the quality of higher education, skill development, and employability of graduates in order to minimize the skill gap.

Keywords: College Students, Soft Skills, Employment, Indian Higher Education, National Education Policy 2020

ADOPTING TECHNOLOGIES FOR LOCAL SELF GOVERNMENT IN BUNDELKHAND REGION: CHALLENGES AND OPPORTUNITIES

Prachi Tiwari

Research Scholar, Bundelkhand University, Jhansi, Uttar Pradesh, India

Dr. Abhishik Kumar Shrivastav

Head Dept. of Commerce, Atarra P G College, Atarra Banda, Uttar Pradesh, India

Abstract

Local governments in the various countries have adopted e-government model to deliver effective services to society and encourage citizen support. Utilizing information from a public irregular survey of 902 government managers from 500 local governments in the United States, we analyze factors that explain the reception of two types of e-government technologies: e-services, which enable electronic service delivery, and correspondence technologies, which enable one-and two-way correspondence with citizens. The local government is a long-standing organisation with a novel idea. It exemplifies the uniqueness of man's social interactions and reflects the spirit of liberty. It is an essential component of a nation's body politic and was established by law to administer local issues in a human settlement with defined limits. Local governments' capacity to deliver and maintain essential services, good fiscal management, and well-managed development has been significantly diminished. Despite early attempts to promote decentralisation, a strong centralised government system was maintained due to the national security environment, political structure, and culture.

Keywords: *Technologies, Local Government, e-government, e-services, Citizen Services*

1. INTRODUCTION

Both in the United States and in India, local-self-government structures have been put in place to better manage community resources and enhance the quality of life for citizens. In 2012, the US Census Bureau counted 78,004 different municipal governments across the country. All told, there are 3,071 counties, 19,422 cities, 15,364 townships, 13,056 public school districts, and 38,213 other types of local governments. Despite variations within and between states, every state has some form of local government that serves both general and specialised needs (Abhishek Jain, 2019).

Counties are the largest and most numerous sub-national governments within a state. Since cities have their own government agencies, the counties are typically in charge of rural areas' municipal administration. As a result of state consolidation, county governments in Rhode Island and Connecticut no longer perform any state-level functions. The equivalent administrative divisions in Louisiana are called Parishes, while in Alaska they are called Boroughs. Counties are the most representative form of local government, so they provide services to 89% of the total US population. In most states, counties serve as the basic unit of local government, but in New

A PLS-SEM Based Approach: Analyzing Generation Z Purchase Intention Through Facebook's Big Data

Vikas Kumar*, Preeti, Shaiku Shahida Saheb, Sunil Kumari, Kanishka Pathak, Jai Kishan Chandel, Neeraj Varshney, and Ankit Kumar

Abstract: The objective of this paper is to provide a better rendition of Generation Z purchase intentions of retail products through Facebook. The study gyrated around the favorable attitude formation of Generation Z translating into intentions to purchase retail products through Facebook. The role of antecedents of attitude, namely enjoyment, credibility, and peer communication was also explored. The main purpose was to analyze the F-commerce pervasiveness (retail purchases through Facebook) among Generation Z in India and how could it be materialized effectively. A conceptual façade was proposed after trotting out germane and urbane literature. The study focused exclusively on Generation Z population. The data were statistically analyzed using partial least squares structural equation modelling. The study found the proposed conceptual model had a high prediction power of Generation Z intentions to purchase retail products through Facebook verifying the materialization of F-commerce. Enjoyment, credibility, and peer communication were proved to be good predictors of attitude ($R^2=0.589$) and furthermore attitude was found to be a stellar antecedent to purchase intentions ($R^2=0.540$).

Key words: Facebook; enjoyment; credibility; peer communication; attitude; intentions to purchase

1 Facebook (F-Commerce)

It has become pertinent for retail marketers to capitalize on social networking sites in promoting products, commercialize transactions, and give fillips to business activities. The digital era has come as a boon and witnessed a change from just being a mere agent

of advertising to handling multifarious activities like review, sharing, feedback analysis, providing pedestals for s-commerce (using social networking sites for e-commerce activities), pecuniary transactions, constant market vigilantism, and so on. A new type of commerce known as F-commerce has emerged as a result of the creation of Facebook^[1], and retailers have started

- Vikas Kumar and Kanishka Pathak are with the Humanities and Management Department, Dr. B. R. Ambedkar National Institute of Technology Jalandhar, Jalandhar 144027, India. E-mail: vikashkumar1061@gmail.com; kanishkapathak1989@gmail.com.
- Preeti is with the Department of Commerce and Business Administration, Kanya Maha Vidyalaya (KMV), Jalandhar 144004, India. E-mail: preetibhaker@gmail.com.
- Shaiku Shahida Saheb is with the Mittal School of Business, Lovely Professional University, Phagwara 144402, India. E-mail: sahebsahi@gmail.com.
- Sunil Kumari is with the Government College for Women, Indra Gandhi University, Ateli 123021, India. E-mail: raosunil77@gmail.com.
- Jai Kishan Chandel is with the Institute of Management Studies, Kurukshetra University, Kurukshetra 136119, India. E-mail: jkims2015@gmail.com.
- Neeraj Varshney and Ankit Kumar are with the Department of Computer Engineering and Applications, GLA University, Mathura 281406, India. E-mail: kumar.ankit@gla.ac.in; neerajvarshney@gla.ac.in.

* To whom correspondence should be addressed.

Manuscript received: 2022-05-25; revised: 2022-09-09; accepted: 2022-09-26



ISSN : 2321-0443

75
आज़ादी का
अमृत महोत्सव

ज्ञान गरिमा सिंधु

(त्रैमासिक पत्रिका)

अंक - 77

(जनवरी-मार्च 2023)



वैज्ञानिक तथा तकनीकी शब्दावली आयोग

शिक्षा मंत्रालय

(उच्चतर शिक्षा विभाग)

भारत सरकार

COMMISSION FOR SCIENTIFIC AND TECHNICAL TERMINOLOGY
MINISTRY OF EDUCATION
(DEPARTMENT OF HIGHER EDUCATION)
GOVERNMENT OF INDIA

अनुक्रमिका

1. अण्डक की लेखनी से		ii
2. संसदकीय		iii
3. संसदन मंडल एवं समन्वय		iv
4. परामर्श मंडल		v
5. राष्ट्रीय शिक्षा नीति 2020 और देवनागरी लिपि में उच्चतर शिक्षा (पूर्वोत्तर भारत की भाषाओं के विशेष संदर्भ में)	डॉ. चंदन कुमार	1
6. भारत में गणितीय शिक्षा की कृत्रिम बुद्धि (प्रज्ञान): राष्ट्रीय शिक्षा नीति 2020 के अनुसार आवश्यकता	डॉ. नारायण शर्मा	11
7. राष्ट्रीय शिक्षा नीति: उच्च शिक्षा में प्रतिमान परिवर्तन	सुश्री सबीना बत्रा	15
8. मध्यवर्ती शिनालय का गढ़वाल क्षेत्र और उसकी बोलियाँ	डॉ. प्रसाद राठौड़ी	21
9. राजभाषा: रोजगार सृजनक्षमकता के विविध आयाम	डॉ. संतोष कुमार बघेल	32
10. वैज्ञानिक साहित्य का अनुवाद और राष्ट्रीय शिक्षा नीति	डॉ. सूर्य कुमारी पौ	38
11. श्रीमद्भगवद्गीता में निहित शांति शिक्षा एक उदाहरण	डॉ. कमलेश	47
12. लोक महाकाव्य लोरिकरण में वर्णित मारकुंडी के वीर लोरिक पत्थर: एक भूवैज्ञानिक विवेचन	डॉ. हृति मालिनी एवं डॉ. वैभव श्रीवास्तव	51
13. राष्ट्रभाषा प्रेम और नेताजी सुभाष चंद्र बोस	श्री संवय चौधरी	60
14. राष्ट्रीय शिक्षा नीति 2020: उच्च शिक्षा के माध्यम से उद्यमियों का विकास	सुश्री रितु	66
15. कृत्रिम बुद्धि (प्रज्ञान) और मशीन अधिगम के साथ वैज्ञानिक संगणना: एक समीक्षा	डॉ. सनी दुकराल	74

राष्ट्रीय शिक्षा नीति: उच्च शिक्षा में प्रतिमान परिवर्तन

डॉ.सबीना बजा, सहायक प्रोफेसर,
स्नातकोत्तर वाणिज्य एवं प्रशासन विभाग
कन्या महाविद्यालय, जालंधर

भारत में उच्च शिक्षा प्रणाली आरंभ से विकसित रही है। एक विकसित राष्ट्र अनिवार्य रूप से एक शिक्षित राष्ट्र होता है। चीन और संयुक्त राष्ट्र अमेरिका के बाद भारत की उच्च शिक्षा प्रणाली दुनिया में विविधता और अनेकता के मामले में अग्रणी है। अन्य देशों की अपेक्षा भारत में शैक्षणिक संस्थानों की संख्या सबसे अधिक है। विकासशील राष्ट्र के रूप में भारत शिक्षा के क्षेत्र में प्रगति कर रहा है। वर्तमान में युवाओं को आत्मनिर्भर और सशक्त बनाने में भारत के महाविद्यालयों और विश्वविद्यालयों की भूमिका सराहनीय है। इस शोध पत्र में उन प्रमुख चुनौतियों को सम्मिलित करने का प्रयास किया गया है, जिन उच्च शिक्षा की चुनौतियों का वर्तमान में भारत सामना कर रहा है। भारत में 2020 की राष्ट्रीय शिक्षा नीतियों की चुनौतियों से निपटने के उपाय शामिल हैं। विभिन्न चुनौतियों के बावजूद भारत की उच्च शिक्षा प्रणाली में तीव्रता से सुधार हो रहा है। एक नए युग के परिप्रेक्ष्य में भारत, शिक्षण उपकरणों की सहायता से विविध समस्याओं को दूर करने एवं देश में उच्च शिक्षा के क्षेत्र में एक आदर्श बदलाव लाने का इच्छुक है। हमारी राष्ट्रीय शिक्षा नीति में यह परिकल्पना भी की गई है कि इतनी बड़ी आबादी वाले चौकट राष्ट्र में सार्थक तरीके से शिक्षित होने की अनंत संभावनाएँ हैं। यदि सीखने के उन्नत डिजिटल शिक्षण उपकरणों का उपयोग करके ज्ञान प्रदान किया जाता है तो भारतीय समाज को इस बात से अवगत करा दिया जा सकता है कि हम वर्तमान में कहीं पिछड़ रहे हैं। उन सभी समस्याओं का समाधान करके हमारा देश सरलता से विश्व के सबसे विकसित राष्ट्रों से उभर कर आगे आ सकता है। 2020 की राष्ट्रीय शिक्षा नीति भारत को विश्व की महारथी बनने का दम सखती है। इसके अंतर्गत बहुविधक, डिजिटल शिक्षा, लिखित संचार, विन्यूजगात्मक तर्क और व्यावसायिक प्रशिक्षण में इच्छानुसार शिक्षा प्राप्त करने की पद्धति में कायाकाल परिवर्तन लाने का इरादा सखती है।

रुडवार्ड विगलिंग ने अपने उपन्यास 'विम' में कहा है कि, "अज्ञानता से बड़ा कोई पाप नहीं है", और यह वास्तविकता है कि अज्ञानी होने से बड़ा कोई पाप नहीं है। व्यापक रूप से शिक्षा की अज्ञानी को प्रबुद्ध करने के एक उपकरण के रूप में मान्यता दी गई है, परंतु यदि कोई शिक्षा प्रदान करने के बहाने अज्ञानी को धोखा देता है, तो उसका उल्लेख करना हमारा कर्तव्य हो जाता है।

भारत में उच्च शिक्षा प्रणाली विश्व की सर्वोत्तम शिक्षा प्रणालियों में से एक है। एक शिक्षित राष्ट्र ही विकसित राष्ट्र होता है। चीन और अमेरिका के उपरांत सम्पूर्ण विश्व में आकार और विविधता में भारत की उच्चतम शिक्षा प्रणाली, तीसरी सबसे बड़ी शिक्षा प्रणाली है। विकासशील राष्ट्र के रूप में भारत शिक्षा के क्षेत्र में प्रगति कर रहा है। वद्यपि भारत की उच्च शिक्षा प्रणाली के समक्ष बहुत सी चुनौतियाँ रही हैं। परंतु, इन चुनौतियों के पार पाने और उच्च शिक्षा प्रणाली को बेहतर बनाने के अनेक समान अवसर भी सामने हैं। विशिष्ट रोजगारों के सृजन लिए

राष्ट्रीय शिक्षा नीति 2020: उच्च शिक्षा के माध्यम से उद्यमियों का विकास

रितु
सहायक प्रोफेसर,
कन्या महाविद्यालय, जालंधर
ritusanchil87@gmail.com
Phone: 8146900386

-विश्वविद्यालयों और स्कूलों को बेहिन और विपणन प्रणाली के समर्थन के माध्यम से उद्यमी बनाने के लिए एक सूत्रधार बनना चाहिए। यह शिक्षा के मूल्य को बढ़ाएगा और छात्रों के लिए प्रेरणा पैदा करेगा।"

माननीय स्वर्गीय डॉ. अब्दुल कलाम, (भारत के पूर्व राष्ट्रपति)

संक्षेप:

1991 में उद्यमीकरण के बाद से, भारत ने उद्यमिता को बढ़ावा देने और उसका पोषण करने का प्रयास किया है। उद्यमशीलता के विकास के लिए प्रत्यक्ष या अप्रत्यक्ष रूप से विभिन्न स्तरों पर प्रयास किए गए हैं। हाल के वर्षों में, इस बात पर बहस छिड़ गई है कि औद्योगिक संस्थान युवाओं को उद्यमिता के लिए कैसे तैयार कर सकते हैं। दुर्भाग्य से, भारत में अब तक उद्यमिता शिक्षा केवल सामान्य व्यावसायिक पाठ्यक्रमों पर केंद्रित थी। लेकिन सामान्य व्यवसाय प्रबंधन शिक्षा का उद्यमशीलता की प्रवृत्ति पर कोई महत्वपूर्ण प्रभाव नहीं पड़ता है। युवा उद्यमियों के लिए एक व्यापक शिक्षण प्रणाली प्रदान करने के लिए विशेष रूप से डिज़ाइन किए गए शिक्षा कार्यक्रमों की मांग है जो नवाचार की धारणाओं को बढ़ाएंगे, उन्हें सही मूल्यों और संज्ञानात्मक प्रणालियों को स्थापित करने एवं उनकी स्वयं क्षमता को आकार देने के लिए लगातार नए ज्ञान को एकीकृत और सक्रिय करेंगे। यह शोध पत्र भारत में उद्यमिता शिक्षा के विकास की व्याख्या करने का प्रयास करता है। इसके बाद यह भारतीय अर्थव्यवस्था में उद्यमिता के महत्व और भूमिका पर चर्चा करता है। उद्यमिता पाठ्यक्रमों के लिए राष्ट्रीय शिक्षा नीति की प्रासंगिकता पर चर्चा करने का भी प्रयास किया गया है। यह शोध पत्र उच्च शिक्षा संस्थानों और नीति निर्माताओं को अपने नीतिगत दायें और प्रथाओं की समीक्षा करने में मदद करेगा ताकि युवाओं को नए उद्यम शुरू करने के लिए लौक से हटकर सोचने के लिए प्रेरित किया जा सके।

परिचय:

देश की अर्थव्यवस्था को बढ़ावा देने के साधन के रूप में उद्यमिता और स्टार्ट-अप का उपयोग किया जा रहा है। उद्यमिता आर्थिक मूल्य बनाने की प्रक्रिया है। यह लाभ कमाने के लिए अपनी किसी भी अनिश्चितता के साथ-साथ किसी व्यावसायिक उद्यम को शुरू करने, प्रवर्धित करने और चलाने की क्षमता और इच्छा है। एक उद्यमी वह व्यक्ति होता है जो एक या अधिक व्यवसायों का निर्माण, स्वामित्व उनका प्रबंधन करता है। अधिकतर जोखिमों को वहन करता है और अधिकतर पुरस्कारों का आनंद लेता है। यह एक प्रवर्धक है, नए विचारों, वस्तुओं, सेवाओं और व्यवसाय या प्रक्रियाओं का स्रोत है।

**Multi-Faceted Role of Higher Education Institutions to Enhance the Quality and Value-based Education
(A Case Study of Kanya Maha Vidyalaya, Jalandhar)**

Ms. Suman Khurana¹, Ms. Vandana Sharma², Ms. Nidhi Bhatia³

ABSTRACT: Education, particularly higher education is the most crucial sector for leveraging the growth and development of the nation in social, economic, cultural, political and scientific aspects. Education has a significant role in shaping the personalities and transforming the students into future citizens of the country. Education shows the difference between good and bad, shows the importance of hard work and helps in the growth and development of individuals. People are able to shape a better society to live in by knowing and respecting rights, regulations and by responding to changing and adverse situations too. Quality of education is of utmost significance both to the provider and receiver in the process of building solid foundation of higher education and bridging the gap between less knowledgeable and erudite sections of population. Higher education institutions have a greater role to play because of their potential of transforming human beings into human resources. The first section of the paper addresses different aspects of education, second focuses on the number and challenges faced by HEIs. The third section highlights some policy initiatives by the government and the fourth section attempts to portray the multi-faceted role of HEIs to enhance quality and value-based education, taking the case study of KMV, Jalandhar.

1. INTRODUCTION

“Education is the most powerful weapon which you can use to change the world.”

Nelson Mandela (Former President of South Africa)

“Educationists should build the capacities of the spirit of inquiry, creativity, entrepreneurial and moral leadership among students and become their role model.”

Dr. A.P.J. Abdul Kalam (Former President of India)

Education, particularly higher education is the most crucial sector for leveraging the growth and development of the nation in social, economic, cultural, political and scientific aspects. Education helps people become better citizens, shows the difference between good and bad, and helps one grow and develop. Thus, people are able to shape a better society to live in by knowing and respecting rights, laws, and regulations. It has a significant role in shaping the personalities and transforming the students into future citizens of the country. It is not only required to earn a living by merely doing a job, but it is essential for the development of mind, body and soul. When people are educated, they can significantly contribute to their families and society in various aspects, thus creating a stable and stimulating community. Since education is a powerful tool to cultivate values in an individual, all the educational institutes have a greater responsibility to impart learning and cultivation of values through education.

-
1. Associate Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar
 2. Assistant Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar
 3. Assistant Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar

EdTech Players: Key Drivers and Implementation of Government Policies

Suman Khurana

Associate Professor, Department of Computer Science & Applications
Kanya Maha Vidyalaya, Jalandhar

Abstract

In order to minimise interruption in education, educational institutions were forced to switch to digital forms of learning due to the COVID-19 pandemic crisis, which gave the Ed-Tech industry a boost and made it a catalyst for the digitalization of education. The development in ed-tech is made possible by fast internet access and an increase in mobile device usage. The Indian EdTech market was estimated to be worth 750 million US dollars in 2020 and is anticipated to grow to 4 billion US dollars by 2025 at a CAGR of 39.77%. The current study addresses the advantages and forces behind education technology as well as how government programmes are being implemented via this industry.

1. Introduction

The use of technologies in education, or "Ed-Tech," has completely changed the educational landscape. The expansion of Ed-Tech and the "smart classroom" business in India is made possible by fast internet access and the rising popularity of mobile devices. About the prospects of this sector, there is a lot of excitement. With 500 million people in the world between the ages of five and 24, India offers a large chance for the education sector to prosper. India's education market is anticipated to grow from an estimated US\$ 117 billion in FY20 to US\$ 225 billion by FY25. the implementation of government programmes using the ed-tech sector, as well as the benefits and drivers of ed-tech.

Integration of Multi-Class Service Paradigm With Generic Trust Mechanism for Innovation, Customization and Adaptability in MANETs

Nitin Khanna, Kanya Maha Vidyalaya Jalandhar, India*

Sandeep Singh, CT University, India

Anshu Bhasin, I. K. G. Punjab Technical University, India

Kamal Malik, CT University, India

ABSTRACT

Trust-based mechanisms are widely used in wireless networks of different kinds for providing security against attack. Trust mechanism provides security from various attacks using both detective and preventive manner. This paper presents a quality service paradigm that can be integrated with any underlying trust mechanism. The paradigm includes different flags corresponding to different services incorporated in various routing packets. The paradigm provides flexible customization and adaptability as per the demand of communicating nodes for effective data transfer. Various quality service classes are designed to formulate route as per the requirement to minimize the routing overhead and balancing of load among nodes. This paradigm power is the trust mechanism with proactive action for detection of malicious nodes in the network. The proposed paradigm is incorporated in an established trust mechanism and compared with standard version of that trust mechanism for packet delivery ratio and routing overhead.

KEYWORDS

Fictitious Node, Link Stability Index, Quality Service Class, Routing Protocol, Trust Mechanism, Trust Value, Wireless Networks

1. INTRODUCTION

With the invention of new technologies, the adaptation of wireless ad-hoc networks has increased to large extent (Zhang et al., 2012), (Moussaoui et al., 2014). The ad-hoc networks have many important applications like WSN, IOT, MANET, VANET and FANET in different fields that attracts the researchers (Triparty et al., 2020), (Jiang et al., 2020), (Chen et al., 2020). Nodes or devices in these types of networks are capable of self-configuration without any centralized control to operate in the network (Mayti et al., 2017). Some networks involve movement of nodes making the network topology

DOI: 10.4018/IJIRR.300290

*Corresponding Author

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

Multi-Faceted Role of Higher Education Institutions to Enhance the Quality and Value-based Education (A Case Study of Kanya Maha Vidyalaya, Jalandhar)

Ms. Suman Khurana¹, Ms. Vandana Sharma², Ms. Nidhi Bhatia³

ABSTRACT: Education, particularly higher education is the most crucial sector for leveraging the growth and development of the nation in social, economic, cultural, political and scientific aspects. Education has a significant role in shaping the personalities and transforming the students into future citizens of the country. Education shows the difference between good and bad, shows the importance of hard work and helps in the growth and development of individuals. People are able to shape a better society to live in by knowing and respecting rights, regulations and by responding to changing and adverse situations too. Quality of education is of utmost significance both to the provider and receiver in the process of building solid foundation of higher education and bridging the gap between less knowledgeable and erudite sections of population. Higher education institutions have a greater role to play because of their potential of transforming human beings into human resources. The first section of the paper addresses different aspects of education, second focuses on the number and challenges faced by HEIs. The third section highlights some policy initiatives by the government and the fourth section attempts to portray the multi-faceted role of HEIs to enhance quality and value-based education, taking the case study of KMV, Jalandhar.

1. INTRODUCTION

"Education is the most powerful weapon which you can use to change the world."

Nelson Mandela (Former President of South Africa)

"Educationists should build the capacities of the spirit of inquiry, creativity, entrepreneurial and moral leadership among students and become their role model."

Dr. A.P.J. Abdul Kalam (Former President of India)

Education, particularly higher education is the most crucial sector for leveraging the growth and development of the nation in social, economic, cultural, political and scientific aspects. Education helps people become better citizens, shows the difference between good and bad, and helps one grow and develop. Thus, people are able to shape a better society to live in by knowing and respecting rights, laws, and regulations. It has a significant role in shaping the personalities and transforming the students into future citizens of the country. It is not only required to earn a living by merely doing a job, but it is essential for the development of mind, body and soul. When people are educated, they can significantly contribute to their families and society in various aspects, thus creating a stable and stimulating community. Since education is a powerful tool to cultivate values in an individual, all the educational institutes have a greater responsibility to impart learning and cultivation of values through education.

-
1. Associate Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar
 2. Assistant Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar
 3. Assistant Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar

Multi-Faceted Role of Higher Education Institutions to Enhance the Quality and Value-based Education (A Case Study of Kanya Maha Vidyalaya, Jalandhar)

Ms. Suman Khurana¹, Ms. Vandana Sharma², Ms. Nidhi Bhatia³

ABSTRACT: Education, particularly higher education is the most crucial sector for leveraging the growth and development of the nation in social, economic, cultural, political and scientific aspects. Education has a significant role in shaping the personalities and transforming the students into future citizens of the country. Education shows the difference between good and bad, shows the importance of hard work and helps in the growth and development of individuals. People are able to shape a better society to live in by knowing and respecting rights, regulations and by responding to changing and adverse situations too. Quality of education is of utmost significance both to the provider and receiver in the process of building solid foundation of higher education and bridging the gap between less knowledgeable and erudite sections of population. Higher education institutions have a greater role to play because of their potential of transforming human beings into human resources. The first section of the paper addresses different aspects of education, second focuses on the number and challenges faced by HEIs. The third section highlights some policy initiatives by the government and the fourth section attempts to portray the multi-faceted role of HEIs to enhance quality and value-based education, taking the case study of KMV, Jalandhar.

1. INTRODUCTION

"Education is the most powerful weapon which you can use to change the world."

Nelson Mandela (Former President of South Africa)

"Educationists should build the capacities of the spirit of inquiry, creativity, entrepreneurial and moral leadership among students and become their role model."

Dr. A.P.J. Abdul Kalam (Former President of India)

Education, particularly higher education is the most crucial sector for leveraging the growth and development of the nation in social, economic, cultural, political and scientific aspects. Education helps people become better citizens, shows the difference between good and bad, and helps one grow and develop. Thus, people are able to shape a better society to live in by knowing and respecting rights, laws, and regulations. It has a significant role in shaping the personalities and transforming the students into future citizens of the country. It is not only required to earn a living by merely doing a job, but it is essential for the development of mind, body and soul. When people are educated, they can significantly contribute to their families and society in various aspects, thus creating a stable and stimulating community. Since education is a powerful tool to cultivate values in an individual, all the educational institutes have a greater responsibility to impart learning and cultivation of values through education.

-
1. Associate Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar
 2. Assistant Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar
 3. Assistant Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar



Design of Attribute Based Encryption with Multiple Keyword Search and Direct Revocation Scheme

Payal Gupta, Research Scholar, Department of Electronics & Communication Engineering, Dav Institute of Engineering & Technology, Jalandhar, India

Dr. Neeru Malhotra, Associate Professor & Head, Department of Electronics & Communication Engineering, Dav Institute of Engineering & Technology, Jalandhar, India

Abstract : Information in the modern world is too vast and too fluid to be kept on a single system. That is why cloud storage and the accessing platforms for the information are a part of the modern-day IT infrastructure. It is very important to have an attribute-based cipher text inception mechanism to protect encrypted data forms and make sure they work well. Also, in order to match the search queries with the data, it is important that the search queries are also included in the same form as the data is encrypted, but in this process, only a single keyword search where the encrypted keyword search consists of only one word is not enough. When data is stored, there needs to be an online verification system because there will be some bad users and some fake users who need to be kicked out. However, in some cases, the revocation can be earned at the speed of the facts of the data, which means that the overall efficiency of the system can be decreased if a revocation process is put in place. In this paper, an approach for attribute based encryption with the functionality of multiple keyword searches and revocation process has been provided. It has been inferred that there is an overall improvement in the token generation time and encryption time with the proposed mechanism.

Keywords: encryption, revocation, keyword search, cloud computing, attributes, keys.

1. Introduction:

It is very clear that the multi-keyword based search is very efficient for the retrieval of the data and very efficient as a tool because of the fact that it shows the security of the data and also shows that the encrypted files which are available for the users are given to the legitimate users only and no malicious user is given access to the files, which is utterly important when we are thinking of an efficient system in which the overall search ability is good and also the security is good [1]. The process starts with the accumulation of data by the authorizer in which the initial steps are to encrypt the data depending upon the keywords and the searching mechanism in the overall system. Encrypted keyword data is stored in the database for the user to retrieve.

It should be understood that the system which has the multiple keyboard searching ability is very efficient in finding the required files because of the fact that the volume of files which are encrypted on a particular database with the help of a ciphertext based attribute encryption system and also involving the revocation of the files is very difficult. The accesses codes which are given to the users are, however, secure, but they need to be proved secure in the selective protected framework so that the system works in the best possible manner [2]. The overall system has multiple capabilities, and apart from that, it has the capability of effective revocation because of the fact that if the user is not the legitimate user, it has to be reported from the accessing of files in the future. It is also possible that the attributes of a specific system will change, or that a certain number of users will make it difficult to withdraw access in one way, which is why each and every aspect must be dealt with separately.

It is important to note that while making a system which has the multiple keywords search one should always be assembled the words that potentially the customers are searching [3]. In cloud computing, users can use the facilities from a specific site based on their needs, and the cloud is a pool of virtualized computing resources that can host various people and workloads in order to sustain a specific level of interest in the resources that are and are needed by different people. Because the cloud computing can host various applications under a different section in a same computing environment it helps to monitor the real time need of the resources and other related need of the workloads which provides a cheaper option for the people and

PRODUCTIVITY AND EFFICIENCY OF AGRO-FOOD FIRMS IN INDIA: AN APPLICATION OF DATA ENVELOPMENT ANALYSIS AND MALMQUIST PRODUCTIVITY INDEX

Monika¹, Kuldeep Kaur², Jatinder Pal³

¹Assistant Professor and Head, Department of Economics, S.D. College,
Hoshiarpur, Punjab

²Professor, Dr. B.R. Ambedkar Chair, Punjab School of Economics, Guru Nanak Dev University,
Amritsar, Punjab

³Assistant Professor, P.G. Department of Economics, Kanya Maha Vidyalaya,
Jalandhar, Punjab

Email-rattujatinder@yahoo.com

Abstract

Given the backward and forward linkages; and export potential of agro-food firms, in this paper an attempt has been made to analyse the firm level efficiency and total factor productivity of this sector. In this context, Data Envelopment Analysis and Malmquist Productivity Index were utilized panel data spanning over twenty two years from 1994-95 to 2015-16 75 Indian agro-food firms. Broadly, study concluded that the first and second generation reforms contributed considerably to efficiency and total factor productivity of agro-food firms. Specifically, Technological change during the second generation reforms was instrumental to aise the productivity. However, global meltdown and overall fall in demand for exports lead to fall in productivity after 2008.

Keywords: DEA, Malmquist Productivity Index, Efficiency, Productivity, Agro-food firms.

Introduction

The relevance of agro-based industry and food industry in particular in an agricultural economy is not debatable. It links the agriculture sector to the rest of the segments of the economy. By 2025, it may touch \$470 billion segment of the manufacturing sector. As per the Annual Survey of Industries (2019-20), in the context of net value added, it has contributed approximately 8 percent of total manufacturing output, 11 percent of total workers engaged in of manufacturing sector and on capital intensity front it accounted for 6 percent of total fixed assets of manufacturing sector. Further, it constituted approximately 10.5 percent of total exports [Ministry of Commerce and Industry, 2023]. Given the backward and forward linkages; and export potential of this segment, it can generate growth and employment opportunities in other sectors also. However, Kumar and Basu (2008) concluded that despite of a strong base and third largest producer of food products in the world, India's food processing industry was operating far below its potential on account of low rate of technological progress and increasing inefficiencies. In addition, Gupta et al., (2014) was of the opinion that performance of food processing SMEs not only depended on technology, research and development but also on suppliers, competitors and government/research Institution. In this context, many serious efforts have been made to develop and modernize this segment of industry in India in order to have better rural development in terms of employment, value addition and exports. For instance, Twelfth five year plan proposed to setup National Mission on Food Processing to improve coordination and implementation of schemes and to enable greater involvement of state governments, this sector was announced as priority sector under Make in India initiative, PM Kisan SAMPADA Yojana to develop mega Food Park, cold chain infrastructure, food safety and quality assurance etc., Credit facility was provided upto 95 percent of protect cost by NABARD etc.

1. Review of Literature

Lachaal et al., (2004) for Tunisian agro-food Industry firms showed that overtime technical inefficiency has increased due to aging of capital stock, of large firms and also due to the government intervention in the form of subsidy. Jajri and Ismail (2006) for Malaysian manufacturing sector revealed that over the time, on an average basis, total factor productivity declined in mid 90s due to financial crises. However, some labour intensive industries like food and wood products were experiencing high efficiency and technological change. Yodafiatfinda et al., (2012) for the Malaysian food processing industry suggested



A Review on Rust Dyeing and Ayurveda Dyeing on Silk with Onion Peel and Harad

Harleen Kaur¹, Dr.Harpreet Kaur^{2*}

¹Research Scholar, P.G. Department of Fashion Designing, Kanya Maha Vidyalaya (Autonomous), Jalandhar, Punjab, India

²Head of the Department, P.G. Department of Fashion Designing, KanyaMahaVidyalaya (Autonomous), Jalandhar, Punjab, India

ABSTRACT

Natural dyes are obtained from natural sources. Most are of plant origin and extracted from roots, wood, bark, berries, lichens, leaves, flowers, nuts, and seeds. Others come from insects, shellfish, and mineral compounds. Natural dyes were the only source of color for textiles, leather, basketry, and other materials until synthetic dyes were developed in the latter half of the nineteenth century. Ayurvedic dyeing is also an ancient method of dyeing using plants, roots, flowers, seeds, barks, leaves and natural minerals. It uses natural mordants for fixing shades and natural gums for holding the goodness of herbs into the fabric. The focus of Ayurvedic Dyeing is to make the fabric oriented for wellness of the body. The use of fabrics and garments to deliver health solutions is actually a very old concept called Ayurveda. Ayurveda is a Sanskrit word where 'Ayur' means health and 'Veda' means wisdom and 'Vastra' is cloth or clothing. It is totally organic, sustainable, and biodegradable. Onion is known for its microbicidal properties. Harad is an indigenous herb known in ayurveda and easily available in the kitchen and home. This is antifungal, anti-bacterial, and antiviral. In the present research, this herb is used to make natural dye as this is well known for their medicinal properties. Mordant used was alum, which has antiseptic properties and is safe for skin and environment. The objective of the study was to make the technique of natural dyeing easy to carry out for home dyers using ingredients from home and to encourage the traditional sustainable practice of preparing Ayurveda, the organic healing cloth. Rust dyeing is an eco-friendly form of dyeing that creates unique surface patterns using scavenged objects of rusted iron. As a dye source, the oxidized iron yields permanent, gorgeous, deep orange tones on fabric and paper. It's a fabulous way to upcycle a garment. A review was done on the research already done in the field of natural dyeing with special focus on dyeing on Silk fabric with vegetable dyes specially, onion peel and also Harad. Besides that it was also tried that review papers were found on the technique of Rust dyeing. After a thorough review, analysis was done on which techniques have already been applied by previous research and where the gaps were there so as to provide a detailed road map for upcoming scholars on this, also modules need to be prepared on these and without previous review of research this is not possible. This is especially important for researchers who want to repeat natural dyeing again and again with established results because the only drawback of natural dyeing is that same color combination is not achieved. So, standardization of this technique is important. A study of K/S value was also done, a review on this was also done



A Review on Bundle Dyeing and Ayurveda Dyeing on Cotton with Heena

Ruchika¹, Dr. Harpreet Kaur²

¹Research Scholar, P.G. Department of Fashion Designing, KanyaMahaVidyalaya (Autonomous), Jalandhar, Maharashtra, India

²Head of the Department, P.G. Department of Fashion Designing, KanyaMahaVidyalaya (Autonomous), Jalandhar, Maharashtra, India

ABSTRACT

Ayurvedic dyeing is an ancient method of dyeing using plants, roots, flowers, seeds, barks, leaves and natural minerals. It uses natural mordants for fixing shades and natural gums for holding the goodness of herbs into the fabric. The focus of Ayurvedic Dyeing is to make the fabric wellness with the goodness of the herbs. The use of fabrics and garments to deliver health solutions is actually a very old concept called Ayurveda. Ayurveda is a Sanskrit word where 'Ayur' means health and 'Veda' means wisdom and 'Vastra' is cloth or clothing. It is totally organic, sustainable, and biodegradable. Heena is indigenous herb known in ayurveda and easily available in the kitchen garden and one's surroundings. This is anti-fungal, anti-bacterial, and anti-viral. In the present research, this herb is used to make natural dye as this is well known for their medicinal properties. Mordant used was alum, which has antiseptic properties and is safe for skin and environment. The objective of the study was to make the technique of natural dyeing easy to carry out for home dyers using ingredients from the kitchen garden and to encourage the traditional sustainable practice of preparing Ayurveda, the organic healing cloth. A review was done on the research already done in the field of natural dyeing with special focus on dyeing on Cotton fabric with vegetable dyes specially, Heena and bundle dyeing with Marigold and Rose petals. Besides that it was also tried that review papers were found on the technique of Bundle dyeing. After a thorough review, analysis was done on which techniques have already been applied by previous research and where the gaps were there so as to provide a detailed road map for upcoming scholars on this, also modules need to be prepared on these and without previous review of research this is not possible. This is especially important for researchers who want to repeat natural dyeing again and again with established results because the only drawback of natural dyeing is that same color combination is not achieved. So, standardization of this technique is important. A study of K/S value was also done, a review on this was also done. So as to standardize the process through chemical methods and also to enhance the empirical validity of this study.

Keywords: Ayurvedic dyeing, Ayurveda, Herb dyeing, Eco-Printing, Bundle Dyeing, Mordant, Color Fastness, Sustainability



A Review on Tie and Dye Ayurvastra Reusable Food Wrapping Using Tea and Turmeric on Khaddar

Geeta¹, Dr. Harpreet Kaur²

¹Research Scholar, ²Head of Department

P.G. Department of Fashion Designing, Kanya Maha Vidyalaya (Autonomous), Jalandhar, Punjab, India

ABSTRACT

Ayurvedic dyeing is an ancient method of dyeing using plants, roots, flowers, seeds, barks, leaves and natural minerals. It uses natural mordants for fixing shades and natural gums for holding the goodness of herbs into the fabric. The focus of Ayurvedic Dyeing is to make the fabric wellness with the goodness of the herbs. The use of fabrics and garments to deliver health solutions is actually a very old concept called Ayurvastra. Ayurvastra is a Sanskrit word where 'Ayur' means health and 'Veda' means wisdom and 'Vastra' is cloth or clothing. It is totally organic, sustainable and biodegradable. Tea and Turmeric are easily available in kitchen. Both of these have natural fabric dyeing properties as well as many health benefits. This is anti-fungal, anti-bacterial and anti-viral. In the present research, this herb is used to make natural dye as this is well known for their medicinal properties. Mordants used was alum, which has antiseptic properties and is safe for skin and environment. The objective of the study was to make the technique of natural dyeing easy to carry out for home dyers using ingredients from the kitchen garden and to encourage the traditional sustainable practice of preparing Ayurvastra, the organic healing cloth. Reusable food wrappings were made by dyeing khaddar with tea and turmeric using tie and dye technique. Spectroscopy, colorfastness to sunlight and washing tests were done. The pH value of the water was checked before dyeing as it affects the outcome of the dyeing process. To test the market acceptability of reusable food wrappings 30 respondents were selected by random sampling.

Keywords: Natural Fabric Dyeing, Ayurvedic Dyeing, Ayurvastra, Tea, Turmeric, Tie and Dye.

I. INTRODUCTION

1.1. What is Natural Dyeing

Natural dyes are obtained from natural sources. Most are of plant origin and extracted from roots, wood, bark, berries, lichens, leaves, flowers, nuts, and seeds. Others come from insects, shellfish, and mineral compounds. Natural dyes were the only source of color for textiles, leather, basketry, and other materials until synthetic dyes were developed in the latter half of the nineteenth century. Of the thousands of natural color substances, very few became significant commercially. (Sara J. Kadolph, n.d.)

1.2. Classification of Natural Dyes

Part of the Plants Dyestuffs (Gulrajani & Gupta, 1992)

Received: 04th December 2022

Revised: 30th December 2022

Accepted: 24th January 2023

A STUDY ON TRADITIONAL COSTUMES AND JEWELLERY OF LAHAULI PEOPLE-HIMACHAL PRADESH

Mr. Tarandeep Kaur
Assistant professor, Kanya Maha Vidyalaya, Jalandhar

ABSTRACT:

This research has been undertaken to study the traditional costumes and jewellery worn by Lahauli peoples. Lahaul and Spiti are merged district of Himachal Pradesh. This is the fourth least densely populated district of India. Lahauli peoples used Hindi, Bodhi, and Sanskrit languages. Lahauli culture is very similar to its neighbouring places Ladakh and Tibet. These people follow two religion Hinduism and Buddhism. Lahaul is a high-altitude district of Himachal. This place is famous for its majestic view of snow-covered mountains, high altitude treks. Lahaul is the coldest regions of the Himalayas, and the area is covered with snow for six months or around the year. Lahaul is rich in culture and have a unique living and dressing style. The natives use to wear woollen clothes around the year to keep them warm. The tribes of Lahaul also dress with heavy ornaments with bold colors.

Keywords: - Lahauli people, traditional, costumes, jewellery

INTRODUCTION:

The saga of costumes and ornaments is as old as human civilization and its uniqueness lies in the fact that each region has its own peculiarity. During the course of evolution, early man's desire to adorn himself has given rise to the art of designing costumes and ornaments. Geophysical and ecological conditions in which different communities have been living, have been an important factor in designing of costumes and ornaments, not only in context of suitable raw material but in the course of designing and use. The use of precious stones, flowers, fruits, seeds, leaves, bones and teeth of animals and ivory must have been the earliest raw material used for gratification of human desire. However, the discovery of metals has changed the entire story. The excavations of Indus Valley civilization and narratives of Vedic literature clearly explain the types of jewellery worn by the people in different ages. There is a variety of costumes and ornaments in India and each body part has particular ornament designed by the skilled craftsmen, who have inherited the art of crafting jewels from their forefathers. The ornaments of Himachal, mainly the silver jewellery is one of the finest examples of the metal craft that has evolved in the state and is still known for its excellence.

Himachal Pradesh culture is rich in diversity & tradition, and their culture is largely reflected in their diverse tribe, cuisine, occupation & traditional dressing style. In Himachal, there are many communities with different castes and tribes; all live in peace and serenity. The traditional dress of Himachal Pradesh people reflects their culture. The ethnic Himachal Pradesh dress is the honour of their diversity. Their unique traditional dressing style can easily identify these communities, and most of the dresses made by woven woollen because of the cold climate conditions. It includes headgear, trousers, footwear, and handwoven dresses. The handwoven vibrant and colourful fabric is now the cultural identity of Himachal Pradesh.

Lahaul and spiti is district of Himachal Pradesh. The word Lahaul' is derived from the Tibetan word Lho-yul meaning 'country in the south'. Another meaning of Lhahi-yul stands for 'country of the gods. The traditional costumes and jewellery of Lahaul are very interesting and very less known by peoples.

This study is an attempt to understand the traditional jewellery and costumes of Lahauli man and women.



A Study on Traditional Costumes and Accessories of Punjabi Female Folk Dances in Youth Festivals of GNDU since Last Five Years

Ms. Randeep Kaur¹, Dr. Simerjeet Kaur², Dr. Harpreet Kaur³

¹Research Scholar, ²Assistant Professor, ³Assistant Professor HOD

P.G. Department of Fashion Designing, Kanya Maha Vidyalaya, (Autonomous) Jalandhar, Punjab, India

I. INTRODUCTION

The world is the planet, Earth and all life on it including human civilization. In a philosophical context, the world is the whole of the physical Universe, or an ontological world. In a theological context, the world is the material or the profane sphere as opposed to the celestial, spiritual, transcendent or sacred spheres. End of the world scenarios refer to the end of human history often in religious contexts. The history of the world is commonly understood as spanning the major geopolitical developments of about five millennia from the first civilizations to the present. In terms such as world religion, world Language, world Government and world war the term world suggests an international or intercontinental scope without necessarily implying participation of every part of the world. The world population is the sum of all human populations at any time. Similarly the world economy is the sum of the economies of all societies or countries, especially in the context of globalization. Terms such as "world championship", "gross world product", and "world flags" imply the sum or combination of all sovereign states.

II. INDIA AND ITS CULTURE

The culture of India refers collectively to the thousands of distinct and unique culture of all religions and communities present in India. In India languages, religions, dance, music, architecture food and customs differ from place to place within the country. Indian culture often labeled as an amalgamation of several cultures, spans across the Indian subcontinent and has been influenced by a history that is several millennia old. Many elements of India diverse cultures such as Indian religions philosophy cuisine like languages martial arts, dance, music and movies have a profound impact across the Indosphere greater India and the world. The partition of India was the division of British India in 1947 which accompanied the creation of two independent states India and Pakistan. The dominion of India is today the republic of India and dominion of Pakistan the Islamic republic of Pakistan and the people's republic of Bangladesh. The partition involved the division of two provinces, Bengal and the Punjab based on district wise Hindu or Muslim majorities. It also involved the division of the British Indian army, the royal Indian navy, the Indian civil service, the railways the Central treasury between the two new dominions. The partition was set



International Journal of Scientific Research in Science and Technology

Print ISSN : 2395-6011 | Online ISSN : 2395-602X

[UGC Journal No : 64011]

Peer Reviewed and Refereed International Scientific Research Journal

Scientific Journal Impact Factor : 8.014

Certificate of Publication

Ref : IJSRST/Certificate/Volume 10/Issue 7/10641

28-Jan-2023

This is to certify that **Ms. Garima** has published a research paper entitled '**A Review on Journey of Madhubani Painting in Present Scenario**' in the International Journal of Scientific Research in Science and Technology (IJSRST), Volume 10, Issue 7, January-February-2023 .

This Paper can be downloaded from the following IJSRST website link

<https://ijsrst.com/IJSRST2310101>

IJSRST Team wishes all the best for bright future

**Editor in Chief
IJSRST**



**Associate Editor
IJSRST**

Website : <https://ijsrst.com>



International Journal of Scientific Research in Science and Technology

Print ISSN : 2395-6011 | Online ISSN : 2395-602X

[UGC Journal No : 64011]

Peer Reviewed and Refereed International Scientific Research Journal

Scientific Journal Impact Factor : 8.014

Certificate of Publication

Ref : IJSRST/Certificate/Volume 10/Issue 7/10641

28-Jan-2023

This is to certify that **Dr.Simerjeet Kaur** has published a research paper entitled '**A Review on Journey of Madhubani Painting in Present Scenario**' in the International Journal of Scientific Research in Science and Technology (IJSRST), Volume 10, Issue 7, January-February-2023 .

This Paper can be downloaded from the following IJSRST website link

<https://ijsrst.com/IJSRST2310101>

IJSRST Team wishes all the best for bright future

**Editor in Chief
IJSRST**



**Associate Editor
IJSRST**

Website : <https://ijsrst.com>



A Review on Journey of Madhubani Painting in Present Scenario

Ms. Garima, Dr. Simerjeet Kaur

Kanya Maha Vidyalaya College, Maharashtra, India

ABSTRACT

India is a treasure trove of art forms that have been passed down from one generation to another. One such art form is Indian folk paintings that have stood even thousands of years. Mithila, the birthplace of Sita of the Ramayana, lies in the state of Bihar, bounded by the Himalayas in the north and the rivers Kosi, Ganga and Gandak in the east, south and west respectively. Over centuries, the people of Mithila have developed their own tradition of art, popularly known as Madhubani Painting, named after a district and a town in the region. What is unique about this tradition which dates back to the 7th century A.D., and is prevalent even today is that it is the women who mastered and practiced it. The style of painting differs from region to region and period to period. There is a living tradition in the art field of Bihar that is called Madhubani Painting which enlightened about the social structure as well as cultural identity of Bihar and the styles of painting has been changing from generation to generation. The article deals with the history, subject matter, use of raw materials and styles of Madhubani Paintings in the context of the role of local artisans of Jitwarpur village in it. Article focuses on the paintings of Madhubani with special emphasis to the present scenario of Madhubani Painting and how the village painters express their skill through organic colors and free hand brush drawing.

KEYWORDS: Madhubani Painting, Painting in Mithila Art

1. INTRODUCTION

Painting, the expression of ideas and emotions, with the creation of certain aesthetic qualities, in two dimensional visual languages. The elements of this language are its shapes, lines, colors, tones, and textures are used in various ways to produce sensations of volume, space, movement, and light on a flat surface. These elements are combined into expressive patterns in order to represent real or supernatural phenomena, to interpret a narrative theme, or to create wholly abstract visual relationships.

An artist's decision to use a particular medium, such as tempera, fresco, oil, acrylic, watercolor or other water-based paints, ink, casein, as well as the choice of a particular form, such as mural, easel, panel, miniature, manuscript illumination, scroll, screen or fan, panorama, or any of a variety of modern forms, is based on the sensuous qualities and the expressive possibilities and limitations of those options. The choices of the medium and the form, as well as the artist's own technique, combine to realize a unique visual image.

Earlier cultural traditions of tribes, religions, guilds, royal courts, and states largely controlled the craft, form, imagery, and subject matter of painting and determined its function, whether ritualistic, devotional, decorative, entertaining, or educational. Painters were employed more as skilled artisans than as creative artists. Later the



A Review on Journey of Chikanikari Embroidery in Present Scenario

Mrs. Navpreet Kaur

Assistant Professor, Kanya Maha Vidyalaya, Jalandhar, Maharashtra, India

ABSTRACT

Embroidery is considered as a passion of women's to express their creativity and spend their leisure time. Chikankari embroidery originated way back in the mughal period of Lucknow specially initiated by residents of Lucknow and was patronized by Jahangir's wife.

The art of Chikankari had flourished under the reign of Awadh later the knowledge shifted to Lucknow but lost its patronage during the British rule. The artisans were illiterate and facing problems. Indian embroidery owes distinctive identity of their own. They are classified on the basis of technique and region of its origin. Chikanwork is pristine art of Central India, widely explored in apparels as well as home products ranging from pastels to bright colors. Following the legacy Muslim community is still dominating the Chikan industry.

Key words: chikankari, innovative, traditional, embroideries.

I. INTRODUCTION

India is a treasure house of handicrafts, handloom weaves and textiles that could add new dimensions to the growing industry. Handicrafts speak a lot about history, rich culture and heritage, traditional skills of native people. Chikankari is one of India's popular and centuries old hand embroidery practiced by a large urban craft community in Lucknow. Lucknow, the city of Nawabs is famous for art, culture, and cuisines, situated on the banks of river Gomati. The cultural life of the city is majorly dominated by music and dance. The exquisite architecture, poetry and delicious food is well known from every nook and corner of the city. The craft is considered as a symbol of Lucknow's tradition. It is believed that a visit to the city is incomplete without buying Chikan work. The embroidery had been used to adorn from the smallest possession to the most sumptuous attire. A delicate and rich craft that had nurtured through its characteristics and fine details. It was used as an embellishment for garments as needle and thread work. The legendary stitches of chikankari is practiced in all parts of India having a distinctive feature. Over the years it has flourished, evolved, survived loss of patronage, declined, suffered commercialization. But now globally appreciated for its uniqueness. This art is hereditary that gives a classy and subtle look to the person carrying it. It is more than 200 years older craft that belongs to local Muslim community, executed by womens supplementing their family income. They get inspiration from art, tribal people, folk culture that forms a vital part in day-to-day life of people Chikankari was known in the 7th century A.D. when white embroidered muslin garments were worn by kings and high officials at royal courts. It was a part of Persian culture at the Mughal attendings. Ancient Mughal paintings also



Contents lists available at ScienceDirect

Chaos, Solitons and Fractals

Journal homepage: www.elsevier.com/locate/chaos

Asymmetrically coupled two lane totally asymmetric simple exclusion process with extended Langmuir kinetics

Tamizhazhagan S^a, Natasha Sharma^b, Atul Kumar Verma^{a,*}

^a Department of Mathematics, National Institute of Technology, Trichy 620 015, Tamilnadu, India

^b PG Department of Mathematics, Kanya Maha Vidyalaya, Jalandhar 144 004, Punjab, India

ARTICLE INFO

Keywords

TASEP

Extended LK

Mean-Field Theory

Monte Carlo Simulation

ABSTRACT

The proposed study is motivated by the transport phenomena where the particle hopping, attachment, and detachment dynamics rely on the occupancy state of the corresponding site on another lane. To depict this kind of scenario, we consider an open two-lane Totally Asymmetric Simple Exclusion Process with the presence of asymmetrically coupled and extended Langmuir kinetics regulations. We have analyzed the steady-state properties of the system by calculating characteristics including phase diagrams, density profiles, phase transitions, and finite size effect. The theoretical results are captured by utilizing the framework of a mean-field theory, and it is recognized that numerical findings match closely with the Monte Carlo simulation outcomes.

1. Introduction

Most of the natural and realistic human-made systems evolve in non-equilibrium state and disclose several novel aspects due to uninterrupted bestowing of internal or external energy. In last few decades, this family of systems has been investigated broadly owing to their effective nature of dynamical actions in various major fields such as biology, physics, chemistry including vehicular flow, ant trails, intracellular transport by motor proteins, gel electrophoresis, and protein synthesis [1–4]. The most crucial factor of a non-equilibrium state is the existence of non-zero particle current even when the system is in steady-state, which is accountable for the deficiency in developing a general structure to examine these kind of systems. To understand the behavior of many particles systems, it is significant to investigate the steady-state dynamics of such out of equilibrium systems. In this direction to analyze the characteristic of the non-equilibrium stochastic transport system, a discrete model namely, totally asymmetric simple exclusion process (TASEP) was introduced by MacDonald and Gibbs in 1968 to study the kinetics of bio-polymerization on nucleic acid templates [5]. In recent decades, this model has proven itself as a mother of all traffic models and has successfully explained various complex transport systems. In TASEP, each lattice site is regarded as either empty or filled by at most one particle, while a particle can join or leave the lattice through different ends and perform forward hopping following a hard-core exclusion process respecting a specific predefined set of dynamical transitions. Surprisingly even though TASEP is a simple model, however it is able to successfully explain various complex out

of equilibrium features such as symmetry breaking, phase separation, shock formation and boundary-bulk-induced phase transitions [6–9].

Moreover, scientists have proposed many studies on TASEP with Langmuir kinetics (LK) which allows the surrounding particles to interact with bulk sites. TASEP coupled with LK model has been efficient in analyzing various stochastic transport processes such as vehicular traffic, intracellular transport, etc., where particles can join/leave the bulk sites. Firstly, Parmeggiani et al. [10] proposed the open one lane TASEP with LK and reported the existence of localized shock which is not present in simple TASEP without LK. Since then a various studies has been conducted based on LK which reported many novel features as mentioned in previous studies [11,12].

In real life, there are various kind of transport processes where particles move along more than one lane and can also switch from one lane to another forming a multi-lane system. For instance, the molecular motors interchange the micro-filaments during the intracellular transport likewise in vehicular traffic, vehicles are interchange the lanes according to their preferences. These phenomena motivate the investigators to analyze the stationary behavior of the multi-channel uncoupled as well as coupled TASEP models [13]. In last decades, a few studies have been proposed which analyzes the steady state behavior of the multi-lane TASEP with [14–16] and without LK [17,18].

Besides, the one-lane TASEP model studied with the modified LK rates in which particle attachment and detachment rates varying depends on the circumstance of the forward neighboring sites [19,20]. Further, in bulk sites, the hopping rate of particles differ respecting



ISSN : 2321-0443



75
आज़ादी का
अमृत महोत्सव

ज्ञान गरिमा सिंधु

(त्रैमासिक पत्रिका)

अंक - 77

(जनवरी-मार्च 2023)



वैज्ञानिक तथा तकनीकी शब्दावली आयोग

शिक्षा मंत्रालय
(उच्चतर शिक्षा विभाग)
भारत सरकार

COMMISSION FOR SCIENTIFIC AND TECHNICAL TERMINOLOGY
MINISTRY OF EDUCATION
(DEPARTMENT OF HIGHER EDUCATION)
GOVERNMENT OF INDIA

अनुक्रमणिका

1. अध्याय की लेखनी से		ii
2. संवादबद्ध		iii
3. संवादन मंडल एवं समन्वय		iv
4. परामर्श मंडल		v
5. राष्ट्रीय शिक्षा नीति 2020 और देवनागरी लिपि में उच्चतर शिक्षा (पूर्वोक्त भारत की भाषाओं के विशेष संदर्भ में)	डॉ. चंदन कुमार	1
6. भारत में गणितीय शिक्षा की कुवित्त बुद्धि (प्रज्ञान): राष्ट्रीय शिक्षा नीति 2020 के अनुसार आवश्यकता	डॉ. स्तारशा शर्मा	11
7. राष्ट्रीय शिक्षा नीति: उच्च शिक्षा में प्रतिमान परिवर्तन	सुश्री सचीना बजा	15
8. मध्यवर्ती हिमालय का गढ़वाल क्षेत्र और उसकी बोलियाँ	डॉ. प्रसाद रतूड़ी	21
9. राजभाषा: रोजगार सृजनतात्मकता के विविध आयाम	डॉ. संतोष कुमार बघेल	32
10. वैज्ञानिक साहित्य का अनुवाद और राष्ट्रीय शिक्षा नीति	डॉ. सूर्य कुमारी पी	38
11. श्रीमद्भगवद्गीता में निहित शांति शिक्षा एक उदाहरण	डॉ. कमलेश	47
12. लोक महाकाव्य लोरेकायन में वर्णित मारकुंडी के वीर लोरिक कथर: एक भूवैज्ञानिक विवेचन	डॉ. सुति मालिनी एवं डॉ. वैभव श्रीवास्तव	51
13. राष्ट्रभाषा प्रेम और नेताजी सुभाष चंद्र बोस	श्री संजय चौधरी	60
14. राष्ट्रीय शिक्षा नीति 2020: उच्च शिक्षा के माध्यम से उद्यमियों का विकास	सुश्री रितु	66
15. कुवित्त बुद्धि (प्रज्ञान) और मज्जीन अधिगम के साथ वैज्ञानिक संगणना: एक समीक्षा	डॉ. सनी ठुकराल	74

भारत में गणितीय शिक्षा की कृत्रिम बुद्धि (प्रज्ञान): राष्ट्रीय शिक्षा नीति 2020 के अनुसार आवश्यकता

डी. कतावा कर्णी

संकायक: गणित विभाग, कन्या महा विद्यालय, जालंधर, पंजाब 144004, भारत

संक्षेप

इस शोध पत्र में मुख्य उद्देश्य भारत में गणितीय शिक्षा के वर्तमान परिदृश्य को उजागर करना है और राष्ट्रीय शिक्षा नीति (एनईपी-2020) की शिक्षा और करकरतों को ध्यान में रखते हुए इसे कैसे फिर से तैयार करना है। मुख्य आवश्यकता स्थान पत्र (बलैक बोर्ड) और पाठक को शामिल करने वाले नियमित कक्षा शिक्षण से अधिक नवीन और छात्रों को शामिल करने वाले शास्त्र तंत्र में स्थानांतरित करना है। जिससे छात्रों के बीच रचनात्मक सोचने को बढ़ावा मिले। केवल समस्या समाधान के बजाय गणितीय अवधारणा सोचने को बढ़ावा देने की आवश्यकता है। गणितीय कंप्यूटिंग को स्कूल स्तर पर बढ़ाए जाने की आवश्यकता है ताकि छात्र गणित के कार्यान्वयन संबंधी भाग पर ध्यान केंद्रित कर सकें, तथा अंतर-विषयक अवधारणाओं को समझ सकें। यह अंगीकरण अंतर्विषयक अनुसंधान और शिक्षा-केंद्रित गतिविधियों को बढ़ावा देता, जो ग.शि.नी के मुख्य कीवर्ड हैं।

कुंजी शब्द: गणित, कंप्यूटिंग, एनईपी (ग.शि.नी) -2020

परिचय

गणित अध्ययन का एक अविश्वसनीय रूप से चुनौतीपूर्ण और महत्वपूर्ण क्षेत्र है जिसका जीवन के लगभग सभी क्षेत्रों में व्यापक है। गणित शिक्षा औपचारिक रूप से गणितीय अवधारणा की शिक्षण-अधिगम प्रक्रिया को शामिल करती है और अनुसंधान के अधिकतर अंतर्विषयक क्षेत्रों का आधार है। अनुसंधान या वैज्ञानिक स्थिति के अलावा, गणित में डिग्री वितीय क्षेत्र, सूचना प्रौद्योगिकी, बैंकिंग, विनिर्माण आदि सहित विभिन्न करियर विकल्पों की ओर ले जाती है। गणित में पेशेवरों के लिए करियर विकल्पों की सूची बहुत विस्तृत व विविध है। एक अच्छी तरह से प्रशिक्षित और सुसज्जित गणितज्ञ विशेषज्ञता के किसी भी क्षेत्र में हमेशा अच्छी तरह से स्थापित स्थिति पाता है। राष्ट्रीय शिक्षा नीति, 2020 में महत्वपूर्ण प्रावधान हैं और यह गणितीय सोच को बनाने और बढ़ावा देने के लिए एक उत्साहजनक संघ प्रदान करती है। इसने 21 वीं सदी के उभार की आवश्यकता का ध्यान रखने के लिए आवश्यक परिचरतों को प्रोत्साहित किया है, जो गणितीय सोच पर आधारित है। राष्ट्रीय शिक्षा नीति ने गणितीय सोच की आवश्यकता की प्रशंसा की और देश को विश्वव्यापी नेता बनने के लिए इसके महत्व की सराहना की। इसने युवा छात्रों की संगणना सोच को विकसित करने की आवश्यकता पर बल दिया। एनईपी नवीन तकनीकों का उपयोग करके गणित सोचने को सुखद और आकर्षक बनाने की आवश्यकता को बढ़ावा देती है। इसने छात्रों के बीच आत्म-तर्क और संगणना क्षमताओं को बढ़ावा देने के लिए मिडिल स्कूल से कोडिंग पाठ्यक्रम शुरू करना अनिवार्य कर दिया।

संपादक
डॉ. गिरिराजशरण अग्रवाल
डॉ. मीना अग्रवाल

शोध दिशा

62

ISSN 0975-735X

UGC APPROVED CARE LISTED JOURNAL

शोध दिशा

ISSN 0975-735X

विश्वस्तरीय शोध-पत्रिका
केंद्रीय हिंदी संस्थान, आगरा से अनुदान प्राप्त
UGC APPROVED CARE LISTED JOURNAL
विश्वविद्यालय अनुदान आयोग द्वारा मान्यता प्राप्त शोध पत्रिका

शोध अंक 62/7 अप्रैल-जून 2023 400.00 रुपए

संपादकीय कार्यालय

हिंदी साहित्य निकेतन, 16 साहित्य विहार,
बिजनौर 246701 (उ-प्र-)
फोन : 0124-4076565, 09557746346
ई-मेल : shodhdisha@gmail.com
वेब साइट : www.hindisahityaniketan.com

क्षेत्रीय कार्यालय

हरियाणा

डॉ० मीना अग्रवाल
ए-402, पार्क व्यू सिटी-2 सोहना रोड,
गुडगाँव (हरियाणा)

दिल्ली एन-सी-आर-

डॉ० अनुभूति

सी-106, शिवकला अपार्टमेंट्स
बी 9/11, सेक्टर 62, नोएडा
फोन : 09958070700

(सभी पद मानद एवं अवैतनिक हैं।)

संपादक

डॉ० गिरिगजशरण अग्रवाल
07838090732

प्रबंध संपादक

डॉ० मीना अग्रवाल

संयुक्त संपादक

डॉ० शंकर क्षेम

डॉ० प्रमोद सागर

उपसंपादक

डॉ० अशोककुमार

09557746346

डॉ० कनुप्रिया प्रचण्डिया

कला संपादक

गीतिका गोयल/ डॉ० अनुभूति

विधि परामर्शदाता

अनिलकुमार जैन, एडवोकेट

आर्थिक परामर्शदाता

ज्योतिकुमार अग्रवाल, सी-ए-

शुल्क

आजीवन (दस वर्ष): छह हजार रुपए

वार्षिक शुल्क : एक हजार रुपए

यह प्रति : चार सौ रुपए

प्रकाशित सामग्री से संपादकीय सहमति आवश्यक नहीं है। पत्रिका से संबंधित सभी विवाद केवल बिजनौर स्थित न्यायालय के अधीन होंगे। शुल्क की रशि 'शोध दिशा' बिजनौर के नाम धेरे। (सन् 1989 से प्रकाशन-क्षेत्र में सक्रिय)

स्वतंत्राधिकारी, मुद्रक, प्रकाशक डॉ० गिरिगजशरण अग्रवाल द्वारा श्री सक्ष्मी ऑफसेट प्रिंटर्स, बिजनौर 246701 से मुद्रित एवं 16 साहित्य विहार, बिजनौर (उ-प्र-) से प्रकाशित। पंजीयन संख्या : UP HIN 2008/25034

संपादक : डॉ० गिरिगजशरण अग्रवाल

ISSN 0975-735X

अप्रैल-जून 2023 ■ 1

अनुक्रम

निपुण भारत मिशन : सहायक पारिस्थितिकी तंत्र/ डॉ० रंजना रूहेला, डॉ० पवनकुमार	20
पुरातन भारतीय गणित के विभिन्न आयाम : एक विश्लेषण और आवेदन/ आनंदप्रभा	26
1857 : सैयद अहमद खाँ एवं म्मिर्जा गालिब की दृष्टि में/ डॉ० अमृता कुमारी	32
जनसंख्या शिक्षा के प्रति उच्च प्राथमिक विद्यालयों के अध्यापकों की अभिवृत्ति का तुलनात्मक अध्ययन/ डॉ० अनिलकुमार	37
जैन तंत्र-साधना की जीवन दृष्टि : एक समीक्षात्मक अनुशीलन/ डॉ० अनिलकुमार सोनकर	43
गाँधी दर्शन और उसकी व्यावहारिकता : गाँधीवाद (परिवर्तित होती अंतर्राष्ट्रीय राजनीति के परिप्रेक्ष्य में)/ डॉ० अशोककुमार गुप्ता	49
निर्मितिवाद उपागम पर आधारित शिक्षण-अधिगम प्रक्रिया का शिक्षार्थियों के उपलब्धि स्तर पर प्रभावशीलता का अध्ययन/ गिरिराज भोजक, आशु शर्मा	54
महाविद्यालय स्तर के शिक्षकों की सांवेगिक बुद्धिमत्ता का अध्ययन/ अजय पँवार, डॉ० अराधना सेठी	60
डुंगर की लोक संस्कृति/ डॉ० रत्नेशकुमार यादव, दविंदर सिंह	67
सहारनपुर जनपद का पुरातात्विक अध्ययन: एक परिचय/ दुर्वेशकुमार	73
भारतीय कृषि व्यवस्था के विकास में ग्रामीण बैंकों की भूमिका : एक अध्ययन/ डॉ० गिरजाशंकर गुप्ता	79
छत्तीसगढ़ के फसल प्रतिरूप में हुए परिवर्तन का अध्ययन/ गौसेवक प्रसाद, डॉ० धर्मेन्द्र सिंह	85
बदलते सामाजिक परिवेश में मोबाईल फोन की उपयोगिता/ डॉ० हरिन्द्रकुमार, डॉ० हरेन्द्रकुमार	89
भारत और कजाखस्तान के मध्य राष्ट्रीय सुरक्षा एवं रक्षा सहयोग/ हरिकेश बिजोरिया	95
भारतीय शोध व्यवस्था को सुदृढ़ करने की दिशा में भारतीय राष्ट्रीय शिक्षा नीति 2020 की भूमिका पर आधारित विश्लेषणात्मक अध्ययन/ हर्ष जैन, डॉ० भुवना वेंकट रमन	103
आदिवासी जनजीवन/ डॉ० श्रद्धा हिरकने, हर्षा पँकरा	108
भारत के ग्रामीण विकास में स्वरोजगार की भूमिका- पश्चिमी उत्तर प्रदेश के संदर्भ में/ डॉ० हिमांशु अग्रवाल, राशिद	112

पुरातन भारतीय गणित के विभिन्न आयाम : एक विश्लेषण और आवेदन

आनंद प्रभा

प्राध्यापिका, स्नातकोत्तर गणित विभाग
कन्या महाविद्यालय, जालंधर (पंजाब)

भारत की संख्यात्मक प्रणाली: भारत की अंक लिपि दुनिया के सबसे बड़े योगदानों में से एक है। ग्रीक वर्णमाला, उदाहरण के लिए, गणना करने में एक बड़ी बाधा थी। मिस्रवासियों के पास भी बड़ी गणनाओं के लिए उपयुक्त संख्यात्मक प्रणाली नहीं थी, वास्तव में यह एक बाधा थी। यूनानियों के बाद भी रोमनों को भी गणितीय गणनाओं के लिए संख्याओं की प्रणाली की आवश्यकता थी। चीन की सचित्र लिपि भी ऐसी गणनाओं के लिए आदर्श नहीं थी। वास्तव में, मिस्रियों, बेबीलोनियों, रोमनों और यहाँ तक कि चीनियों की गणितीय प्रणालियाँ, सभी स्वतंत्र प्रतीकों का उपयोग करते हुए, भारत से अंक प्रणाली से सहायता प्राप्त करने तक उतनी ही आगे बढ़ीं जितनी वे कर सकते थे। 1200 ईसा पूर्व तक, गणितीय ज्ञान को वेदों के नाम से जाने जाने वाले ज्ञान के एक बड़े हिस्से के रूप में लिखा जा रहा था। इन ग्रंथों में, संख्याओं को सामान्यतः दस की शक्तियों के संयोजन के रूप में व्यक्त किया गया था। उदाहरण के लिए, 365 को तीन सौ (3×10^2), छह दहाई (6×10^1) और पाँच इकाइयों (5×10^0) के रूप में व्यक्त किया जा सकता है, हालाँकि दस की प्रत्येक शक्ति को प्रतीकों के एक सेट के बजाय एक नाम के साथ दर्शाया गया था। यह मानना उचित है कि दस की शक्तियों का उपयोग करने वाले इस प्रतिनिधित्व ने भारत में दशमलव-स्थान मूल्य प्रणाली के विकास में महत्वपूर्ण भूमिका निभाई।

वैदिक गणित: बहुत से लोगों को इस बात का एहसास नहीं है कि प्राचीन भारत महान गणितीय विकास का जनक है। आज हम जिस चीज का आनंद ले रहे हैं, वह मुख्य रूप से वैदिक सभ्यता से निकली शुरुआती उपलब्धियों से आई है। दुनिया के अन्य हिस्सों में गणित की प्रणालियों में अंतर और जो हम वैदिक परंपरा में पाते हैं वह यह है कि वैदिक गणित ने दसियों, सैकड़ों, हजारों, आदि की प्रणाली विकसित की थी, और एक स्तंभ के शेष को ले जाने का आधार बनाया। यह बड़ी संख्या की आसान गणना के लिए बनाया गया था जो कि अन्य प्रणालियों में लगभग असंभव था, जैसा कि यूनानियों, रोमनों, मिस्रियों और यहाँ तक कि चीनी लोगों के साथ पाया जाता है। वैदिक प्रणाली ने भी शून्य का आविष्कार किया था, जिसे गणित के इतिहास में सबसे बड़ी घटनाओं में से एक कहा गया है।

शुल्ब सूत्र और शून्य का महत्व: यह शुल्ब सूत्र ही था जिसने वैदिक मंदिरों और वेदियों के लिए उपयोग किए जाने वाले इन ज्यामितीय सूत्रों के आधार को दर्ज किया। उदाहरण के लिए, यह बताता है कि एक त्रिभुज के समान क्षेत्रफल का एक वर्ग कैसे बनाया जाए, एक वर्ग के समान क्षेत्रफल का एक वृत्त कैसे बनाया जाए, और एक वर्ग के क्षेत्रफल का दोगुना, तिगुना या एक तिहाई

PG Department of Retail Management

Journal of Research & Development
A Multidisciplinary International Level Refereed and Peer Reviewed Journal
ISSN: P-ISSN-2707-2027, E-ISSN-2708-1011, Volume-15 Issue-11

Journal of Research and Development

A Multidisciplinary International Level Refereed and Peer Reviewed Journal

May-2023 Volume-15 Issue-11

Chief Editor

Dr. R. V. Bhole

Ravichandram Survey No-101/1, Plot, No-23,
Mundada Nagar, Jalgaon (M.S.) 425102

EDITORIAL BOARD		
<i>Nguyen Lam Linh</i> (Hanoi/ Vietnam)	<i>Prof. Andrew Christopher</i> Dorset, Michigan (USA)	<i>Prof. S. N. Bharambe</i> Ahmednagar (M.S.)
<i>Dr. K. K. Narthade</i> Nanded (M.S.)	<i>Prof. B. P. Mishra,</i> Ajmer (Rajasthan)	<i>Prin. J. N. Verma</i> Raipur (C.G.)
<i>Dr. C. F. Rajawade</i> Pune (M.P.)	<i>Prof. K. J. Verma</i> Bhopal (M.P.)	<i>Dr. B. B. Sharma</i> Lucknow (U.P.)
<i>Dr. Abhishek/Vagrap</i> Bengaluru (Karnataka)	<i>Dr. Vasa Trivedi</i> Indore (M.P.)	<i>Dr. Chitvalkaranan</i> New Mumbai (M.S.)
<i>Dr. S. T. Bhakre</i> Ahmednagar (M.S.)	<i>Prin. A. S. Kulkarni</i> (M.S.)	<i>Prof. Kaveri/Dabholkar</i> Raipur (C.G.)

Published by- Chief Editor, Dr. R. V. Bhole (Ahmednagar)

The Editors shall not be responsible for originality and thought expressed in the papers. The authors shall be solely held responsible for the originality and thoughts expressed in their papers.

© All rights reserved with the Editor.

Impact of Branding On Consumer Purchase Decision

Ms. Chetna Nayyar¹, Ms. Madhuri Tiwari², Ms. Rajbeer Kaur³, Ms. Priya⁴

¹Assistant Professor, Kanya Maha Vidyalaya, Jalandhar

²Assistant Professor, Kanya Maha Vidyalaya, Jalandhar

³Assistant Professor, Kanya Maha Vidyalaya, Jalandhar

⁴Assistant Professor, Kanya Maha Vidyalaya, Jalandhar

Corresponding author- Ms. Chetna Nayyar

Email- Chetanayyar100@gmail.com

Abstract

This paper is about studying the impact of branding on consumer purchase decisions. Brand affiliation put a high impact on consumer buying patterns. Now, the consumer is more knowledgeable about various brands and factors such as price, quality, value, and other factors. Brands create a sense of status in society so consumers are now starting to use various brands according to the trends or fashion. The consumer wants a sense of recognition that's why they prefer to buy branded products or expensive products over non-branded ones to show their status. The sense of status gives recognition in society, family, and friends that make the consumer happy. Branding is imperative marketing through which observation of buying behavior of consumers and their viewpoint towards brands can be studied. The purchasing decision towards brands is also affected by the nature of the consumer, age factor, income, gender, or personality traits. The word loyalty also comes in branding if consumers are fully loyal to branded products then he/she may prefer brands over brands. Branding association can affect organizations in a positive or negatively way, if brand image is positive then consumers prefer to buy products and repeats purchases also. But if there is negative image of the brand in the eyes of consumers then there will be no repetition of purchases and retention of consumers. So firms incur huge amount of expenditure on the advertisement to maintain their brand image and also organizes brand equity management programs.

Keywords: - Brand Association, Consumer buying behavior, Imperative marketing.

Introduction

Branding is important for any business. Brand Association put a great impact on customer choice. Now, Consumer is aware of brand knowledge. Studying the behavior of consumers is generally significant for marketers. Studying the nature or behavior of consumers provides a way to understand what way consumer make their purchases. A good brand image and brand awareness lead to good brand knowledge which in turn. The higher the brand knowledge, the higher will be the consumer's concern about the reliability of the brand. Consumers prefer branded products over ordinary products and customers think that branded products are more durable and can be used for extended periods of your time. A brand enhances product quality by highlighting various opportunities that make the products more attractive and better. If a company wants to manage their brands, then it should have to fulfill the desires and wishes of the consumers. The brand is a sense of recognition that makes or changes the consumer's decision in favor of a product or a brand. Now the market become too much competitive, with this

competition in the market is arises. If you want to compete in this market, you should have to develop a strong brand image. Brand image is an image that a consumer has specific concerns about the brand and reaction to the brand in the market places. Consumers are more status conscious and they always prefer to buy branded products over non-branded ones. It is always seen that behavior of the consumers toward branded products or services is based on their age, gender, and personality traits. This study is aimed at analyzing the behavior of consumers toward purchasing branded products and services and what factors or attributes they consider while making their purchases. If we talk about modern society, brands not only represent the company but have also a strong attachment to the product's quality, social class, taste, etc. Branding is a key tool that helps create customer value, creating and maintaining competitive advantage.

Department of Physical Education

Education and Society
शिक्षण आणि समाज



ISSN:2278-6864

CERTIFICATE OF PUBLICATION

This is to certify that
Davinder Singh

Department of Physical Education, Kanya Maha Vidyalaya, Jalandhar, Punjab, India
For the paper entitled

Assessment of Physical Activity Attitude and Social Support among College Students in Punjab

Vol.46, No.2 January-March 2023

in

Education and Society

Impact Factor: 6.718
UGC care Group 1 Journal



Assessment of Physical Activity Attitude and Social Support among College Students in Punjab

Davinder Singh¹, Varun Singh Bhadouria², Neha¹, Etika¹, Pavneet¹, Dimple¹

¹Department of Physical Education, Kanya Maha Vidyalaya, Jalandhar, Punjab, India

²Department of Physical Education and Sports, Central University of Haryana, India

Abstract

Objective: The present study was aimed to ascertain the role of Physical Activity Attitude and Social Support among College Students in Punjab. **Methods:** For this purpose, One Thousand Only (N=1000) girls Students of 18 to 23 years of age group were selected to act as subjects. A prior consent was sought from all the subjects after being informed about the objective and protocol of a study. The subjects were segregated into Four Streams which includes (n1=250 Science Students); (n2=250 Commerce & Business Administration Students); (n3=250 Humanities Students); (n4=250 Computer Science & Applications Students). **Statistical Design:** One Way Analysis of Variance (ANOVA) were employed to compare the four groups of college students. For testing the hypotheses, the level of significance was set at 0.05. **Results:** In a nutshell it can be said that from the findings that significant differences were found in Physical Activity as a Social Experience (p=.000), Health and Fitness (p=.000), Pursuit of Vertigo (p=.000), Aesthetic Experience (p=.000), Catharsis (p=.000), Ascetic Experience (p=.000) and Physical Activity Attitude (Total) (p.000) shows significant differences among the averages of Science, Commerce & Business Administration Students, Humanities Students and Computer Science & Applications Students. However, insignificant differences had been observed in the Physical activity and its place in University (p=.76) among the four groups of college students. Summarizing from the findings we can say that insignificant differences were found among the four groups of college students on the sub-variables of Family (p=.20), Friends (p=.61), Other Significant Persons (p=.88), and Social Support (Total) (p=.63). **Conclusion:** Based on the findings, this study not only provides new knowledge with reference to Physical Activity Attitude and social support among four groups of college students but also serves, as a foundation upon which future studies in this area is possible. Hopefully, this research contributed to an understanding of Physical Activity Attitude and social support in a sports setting and its findings and recommendations can serve as a basis for future research projects.

Keywords: Physical Activity Attitude and Social Support

Introduction

Physical activity is considered as a vital constituent for the formulation of healthy habits and is considered crucial for an individual's overall growth. There are many advantages to engaging in regular physical activity, and doctors, physical educators, coaches, and teachers occasionally make an effort to educate the public about these advantages through public health campaigns in order to promote an individual's physical, mental, social, and emotional development. Despite the fact that the benefits of physical activity are widely documented, Caspersen et al. (2000) observed a sharp reduction in participation between the ages of 15 and 25. One of the main health issues of the twenty-first century has been identified as physical inactivity (Blair, 2009). According to epidemiological data, physical activity levels fall from high school to college, and activity levels among college populations are typically insufficient to enhance fitness and health (Kilpatrick, 2005). Excessive physical exercise, according to certain writers like Modolo et al. (2011), may put young people at risk for eating habits that are harmful to their health. On the other hand, because improper eating habits are more prevalent in overweight and obese people, it is thought that young people who engage in less physical activity are more likely to do so (Alves et al., 2008; Scagliusi et al., 2009). At any age, physical activity improves mental health (Physical Activity Guidelines Advisory Committee, 2008). Physical activity has been linked to more positive effects and higher life satisfaction in general, therefore it may be a useful technique for boosting wellbeing (Arent et al., 2000; Ekkekakis et al., 2011; Ekkekakis, 2003; Netz et al., 2005; Penedo and Dahn, 2005; Rejeski and Mihalko, 2001).

According to Cohen et al. (2000), Lox et al. (2006), and Wallston et al. (1983), social support is another parameter of the current study and is defined as the comfort, assistance, well-being, and information that people receive from formal or informal contacts with societal organisations or other people. Social support lowers the detrimental psychological effects of exposure to stressful life events and is connected with overall improved psychological health (Cohen & Wills, 1985). In addition, social support has been described as those interactions or relationships that give people with practical aid or ensconce them in a social system that is thought to foster affection, care, or a sense of attachment to a respected social group (Hobfoll, 1988). Recent evidence suggests that social support networks are crucial to the performance and retention of

EXAMINATION OF THE DIFFERENCES IN DISPOSITIONAL FLOW DIMENSIONS AMONG CLOSED SKILL ATHLETES: A CROSS-SECTIONAL STUDY

Dr. Davinder Singh

Assistant Professor & Head, Department of Physical Education, Kanya Maha Vidyalaya
(Autonomous), Jalandhar Punjab, INDIA

ds_rajput87@yahoo.in

Mr. Varun Singh Bhadoria

Research Scholar, Central University of Haryana, Mahendergarh, Haryana, INDIA

varunsingh639@gmail.com

Dr. Gaurav Dureja

Assistant Professor, Department of Physical Education-TEL&R, Post Graduate Government
College, Sector-11, Chandigarh, INDIA

g_dureja83@yahoo.com

ABSTRACT

The study intended to evaluate the role of Dispositional Flow Scale-2 (DFS-2) among closed skill athletes. The sample size was collected using a quantitative design, sixty (N=60) male university level closed skill athletes having the age from 19 to 25 years were selected as a subject. An earlier consent was taken from every one of the subjects subsequent to being educated about the goal and convention regarding a study. The sixty (N=60) subjects were segregated into three groups i.e., N₁= 20 Archery, N₂=20 Swimming, N₃= 20 Gymnastics. To measure the level of Flow of the subjects, the Dispositional Flow Scale-2 (DFS-2) Questionnaire constructed by Jackson & Eklund (2004) was administered. One-way Analysis of Variance (ANOVA) was used to compare various sports groups i.e., closed skill athletes. Where 'F' values were found significant, LSD (Least Significant Difference) Post-hoc test was applied to find out the direction and degree of differences. The alpha level was set at $\leq .05$ level in all the analyses. Results revealed significant differences on the sub-variables Challenge Skill Balance, Loss of Self-Consciousness and Transformation of Time. Anyway no massive contrasts were found on the sub-factors Action-Awareness Merging, Clear Goals, Unambiguous Feedback, concentration on the task at hand, Sense of Control, and Autotelic Experience. In addition, the findings suggest which dispositional flow state should be emphasized when working with Archery group with regard to Challenge Skill Balance, Loss of Self-Consciousness and Transformation of Time and which should be emphasized when dealing with players in swimming and gymnastics with respect to dispositional flow state. Hopefully this research contributed to an understanding of the dispositional flow state in sports setting and its findings and recommendations can serve as a basis for future research projects. The findings could be valuable in the training process as well as in athletes' psychological preparation.

Keywords: Athletes, Dispositional Flow Scale-2, Closed Skill, Optimal Experience

Introduction

Nowadays, accepting the psychological variables that complement the successful peak athletic performance in sports arenas has a great significance in the area of competitive sports (Cameron Norsworthy et al. 2017). Positive psychology has increasingly been used in performance

Association Of Awareness Towards Diet And Nutritional Factors On Obesity Among School Going Adolescent

By

Mr. Varun Singh Bhadoria

Research Scholar, Central University of Haryana, Mahendergarh, Haryana, INDIA

Email: varunsingh639@gmail.com

Dr. J.P.Bhukar

Associate Professor, Department of Physical Education and Sports, Central University of Haryana,

Mahendergarh, Haryana, INDIA, Email: jpbhukar@cuh.ac.in

Dr. Davinder Singh

Assistant Professor, Department of Physical Education, Kanya Maha Vidyalaya, Jalandhar, Punjab, India

Abstract

The growing prevalence of obesity among school adolescents is a major public health concern. It can be seen mostly as a result of modifiable risk factors like lack of required physical activity and rapid change in dietary habits among them. The present cross sectional descriptive study was done among adolescents studying in schools (government and private) of Bhopal city. School adolescents were classified as obese and non-obese as per the WHO criteria used for obesity in South East Asia Region (SEAR). Pre-tested, self-administered questionnaire was used to collect data which comprised of socio demographic information and various dietary habits like frequent consumption of fast & fried food, bakery products and little dietary behavior. Obesity epidemic has been on rise and this has been attributed to unhealthy practices including physical inactivity and unhealthy diet. Adolescence has been a critical period for development of obesity due to changes in body composition and behavior. To assess knowledge, attitude and practices (KAP) regarding obesity-risk reduction factors and its association with obesity-risk among Junior high school students. The growing prevalence of obesity among school adolescents is a major public health concern. It can be seen mostly as a result of modifiable risk factors like lack of required physical activity and rapid change in dietary habits among them. The present cross sectional descriptive study was done among adolescents studying in schools (government and private) of Lucknow city. School adolescents were classified as obese and non-obese as per the WHO criteria used for obesity in South East Asia Region (SEAR). Pre-tested, self-administered questionnaire was used to collect data which comprised of socio demographic information and various dietary habits like frequent consumption of fast & fried food, bakery products and little dietary behavior.

Keywords : Nutrition , Obesity, Diet .

Introduction

Obesity in India has reached epidemic proportions in the 21st century[1], with morbid obesity affecting 5% of the country's population. India is following a trend of other developing countries that are steadily becoming more obese. Unhealthy, processed food has become much more accessible following India's continued integration in global food markets. This, combined with rising middle class incomes, is increasing the average caloric intake per individual among middle class and high income households[2].[2] Obesity is a major risk factor for cardiovascular disease, and NGOs such as the Indian Heart Association have been raising awareness about this issue.[3]



Analysis of gold nanoparticles dispersed bismuth borate glass: effect of size and concentration

Shivani Singla¹, Abhishek¹, Naveen Bansal², Neetu Chopra², and Gopi Sharma^{3*}

¹Department of Physics, University Institute of Sciences, Chandigarh University, Mohali, India

²Department of Computer Application, Chandigarh Group of Colleges, Jhanjeri, Mohali, India

³Department of Physics, Kanya Maha Vidyalaya, Jalandhar, India

Received: 14 October 2022

Accepted: 21 January 2023

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2023

ABSTRACT

In the present report, the preparation of bismuth borate glass with molar composition $35\text{Bi}_2\text{O}_3\text{-}65\text{B}_2\text{O}_3$ containing 3×10^9 number of different size gold nanoparticles (10 nm, 40 nm and 100 nm) is done with conventional melt quench technique. No post treatment is carried out to disperse nanoparticles as the post-treated glasses contain crystals which act as scattering centres and reduce the efficiency of the material. The as-obtained glasses are characterised under several techniques to study structural, morphological, thermal and optical modifications in it with the variation in the size of the incorporated gold nanoparticles. X-ray diffraction confirms the amorphous nature of the prepared glass even with the addition of 3×10^9 number of gold nanoparticles. In addition, Fourier transformed infrared spectroscopy indicates that functional groups of glasses are BO_3 and BO_4 units. The presence of gold nanoparticles is confirmed from the images recorded by field emission scanning electron microscopy, transmission electron microscopy and spectra obtained from energy-dispersive spectroscopy. Thermal stability factor calculated from differential thermal analysis data confirms the increase in glass forming ability with the increase in particle size. Variation in optical response is studied by UV-Vis transmission spectra. These glasses are found to be highly promising for the fabrication of optical devices.

1 Introduction

Metallic nanoparticles dispersed dielectric materials, more specifically, glasses have been investigated intensively in the past few years for applications in lasers, opto-electronic devices, photovoltaic cells,

optical data transfer and biosensors due to their sufficiently high transparency, mechanical strength, economical bulk production and high non-linear optical behaviour [1–6]. In addition, their ultrafast response-time and extraordinary third-order non-linearity makes them potent candidate for ultrafast

Address correspondence to E-mail: sharmagopi28@yahoo.com

<https://doi.org/10.1007/s10854-023-09964-w>

Published online: 13 February 2023

Springer

Content courtesy of Springer Nature, terms of use apply. Rights reserved.



Analysis of gold nanoparticles dispersed bismuth borate glass: effect of size and concentration

Shivani Singla¹, Abhishek¹, Naveen Bansal², Neetu Chopra³, and Gopi Sharma^{3,*}

¹Department of Physics, University Institute of Sciences, Chandigarh University, Mohali, India

²Department of Computer Application, Chandigarh Group of Colleges, Jhanjeri, Mohali, India

³Department of Physics, Kanya Maha Vidyalaya, Jalandhar, India

Received: 14 October 2022

Accepted: 21 January 2023

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2023

ABSTRACT

In the present report, the preparation of bismuth borate glass with molar composition $35\text{Bi}_2\text{O}_3\text{-}65\text{B}_2\text{O}_3$ containing 3×10^8 number of different size gold nanoparticles (10 nm, 40 nm and 100 nm) is done with conventional melt quench technique. No post treatment is carried out to disperse nanoparticles as the post-treated glasses contain crystals which act as scattering centres and reduce the efficiency of the material. The as-obtained glasses are characterised under several techniques to study structural, morphological, thermal and optical modifications in it with the variation in the size of the incorporated gold nanoparticles. X-ray diffraction confirms the amorphous nature of the prepared glass even with the addition of 3×10^9 number of gold nanoparticles. In addition, Fourier transformed infrared spectroscopy indicates that functional groups of glasses are BO_3 and BO_2 units. The presence of gold nanoparticles is confirmed from the images recorded by field emission scanning electron microscopy, transmission electron microscopy and spectra obtained from energy-dispersive spectroscopy. Thermal stability factor calculated from differential thermal analysis data confirms the increase in glass forming ability with the increase in particle size. Variation in optical response is studied by UV-Vis transmission spectra. These glasses are found to be highly promising for the fabrication of optical devices.

1 Introduction

Metallic nanoparticles dispersed dielectric materials, more specifically, glasses have been investigated intensively in the past few years for applications in lasers, opto-electronic devices, photovoltaic cells,

optical data transfer and biosensors due to their sufficiently high transparency, mechanical strength, economical bulk production and high non-linear optical behaviour [1–6]. In addition, their ultrafast response-time and extraordinary third-order non-linearity makes them potent candidate for ultrafast

Address correspondence to E-mail: sharmagopi28@yahoo.com

<https://doi.org/10.1007/s10854-023-09964-w>

Published online: 13 February 2023

Springer

Content courtesy of Springer Nature, terms of use apply. Rights reserved.

Investigation of Dysprosium-Incorporated Potassium Boro-Tellurite Glasses Toward Radiation Screening and Photonic Applications

Surbhi Sharma, Neetu Verma,* and Sandeep Kaur

A series of quaternary tellurite-based glasses $(72-x)\text{TeO}_2 + 25\text{B}_2\text{O}_3 + 3\text{K}_2\text{CO}_3 + x\text{Dy}_2\text{O}_3$, where $(x = 0, 0.5, 1, 1.5, 2, 2.5)$, are prepared using melt quenching technique. The effect of dopants on structural, physical, optical, and thermal properties of alkali boro-tellurite glasses are studied using the differential thermal analysis (DTA) technique, UV-vis spectrometer, and photoluminescence technique. The density of as-prepared samples has been obtained using the conventional Archimedes principle and other physical parameters, viz. molar volume and ion concentration, are also calculated using density. The optical absorption spectra exhibits different excited states of Dy^{3+} corresponding to ${}^6\text{H}_{15/2} \rightarrow {}^6\text{F}_{5/2}$ (~105 nm), ${}^6\text{F}_{3/2}$ (~755 nm), ${}^6\text{F}_{9/2}$ (~473 nm), ${}^6\text{H}_{13/2}$ (~454 nm), ${}^6\text{G}_{11/2}$ (~427 nm), ${}^6\text{F}_{7/2}$ (389 nm), ${}^4\text{P}_{3/2}$ (~366 nm). With the increase in Dy^{3+} concentration, an increase in optical bandgap, density, and molar volume as well as decrease in molar reflectivity, and reflection loss is evident from this study. The effect of Dy^{3+} ion concentration on Y/B intensity ratios and CIE chromaticity coordinates have been evaluated to understand the possible applications of aforementioned glass samples for white-light-emitting diodes (WLEDs). Moreover, various shielding parameters, viz. half value layer (HVL), mean free path (MFP), effective atomic number (Z_{eff}), mass attenuation coefficient (MAC) have also been determined to understand the shielding characteristics of as-prepared glass samples.

1. Introduction

Development in the field of solid-state lighting (SSL) technology has brought a revolution in the lighting industry. To meet the ever-increasing energy demands, noncrystalline materials doped with rare earths (RE) ions have drawn the interest of various researchers due to their extraordinary physical, chemical, and optical properties. Especially, advancement in the white-light-emitting diodes (WLEDs) technology is the key objective of researchers owing to its high efficiency, low power consumption, etc.^[1–8] Nowadays, due to advancements in fabrication techniques to produce materials with desired optical transparency,

density, and thermal stability, noncrystalline materials have also drawn the interest of researchers toward radiation shielding. Due to various limitations such as opaqueness, crack prone nature of conventional radiation shields made of high-density concrete and lead (Pb), such materials need to be replaced. Thus, there is a need to have transparent radiation shields.

Glasses with tellurite as a host offers the lowest phonon energy (about 780cm^{-1}) and are transparent in the visible, near, and mid-infrared spectral region (0.33–7.3 μm).^[9] In the field of photonics, low phonon energy materials are desirable as they enhance the fluorescence efficiency of RE ions on the account of reduced non-radiative decay rates.^[10–12] Tellurites offer better chemical durability and lower scattering as well as absorption losses which make them a promising candidate for optical applications.^[13]

Meanwhile, the combination of TeO_2 and B_2O_3 will reduce hygroscopicity, broaden emission peaks, improve quantum yields, and depolymerization will

make boro-tellurite glasses a viable candidate for a variety of optical and photonic applications.^[14–25] Incorporation of alkali metal oxides, viz. K_2CO_3 , Li_2CO_3 in the RE-doped boro-tellurite glasses reduces hygroscopicity, improves glass quality, and increases IR transmission.^[26–27] Trivalent RE elements exhibit luminescence over a wide range of wavelengths owing to their $4f$ or $4f5d$ energy states.^[28] Trivalent dysprosium (Dy^{3+}) ions are considered to have the potential for mid-infrared and white light emission and hence find applications in solid-state lasers, Q switching, fiber optics, and amplifiers in telecommunication.^[29–31] Trivalent dysprosium (Dy^{3+}) doped glasses show intense emission at blue (486 nm, ${}^6\text{F}_{9/2} \rightarrow {}^6\text{H}_{15/2}$) and yellow (578 nm, ${}^4\text{F}_{9/2} \rightarrow {}^6\text{H}_{13/2}$) wavelengths.^[7,32,33]

Recently Sathiyapriya et al.^[34] synthesized Dy^{3+} doped zinc barium boro-tellurite glasses and calculated shielding parameters like mean free path (MFP), Mass attenuation coefficient (MAC), and effective atomic number (Z_{eff}) to estimate the shielding ability of as prepared glasses. Similarly, Lakshminarayana et al.^[35] studied gamma ray attenuation characteristics of (Dy^{3+} , Er^{3+}) co-doped heavy metal boro-tellurite glasses and computed photon interaction parameters.

S. Sharma, N. Verma, S. Kaur
P.G. Department of Physics
Kanya Maha Vidyalaya
Jalandhar, Punjab 144004, India
E-mail: neetuverma73@gmail.com

The ORCID identification number(s) for the author(s) of this article can be found under <https://doi.org/10.1002/pssa.202200715>.

DOI: 10.1002/pssa.202200715

Drug Delivery Systems

Gagandeep Kaur, Ramanjeet Kaur, Jasmeet Kaur, Harleen Singh, Harsh Kumar and Pooja Sharma*

Analyzing the modulations induced in the mixed micellar behavior of 1-alkyl-3-butylimidazolium based surface-active ionic liquids with an antibiotic drug in aqueous media

<https://doi.org/10.1515/tsd-2023-2512>

Received March 7, 2023; accepted March 31, 2023

Abstract: The study aims to scrutinize the mixed micellization and interfacial behavior of two 1-alkyl-3-butylimidazolium based surface-active ionic liquids (SAILs) i.e., 1-decyl-3-butylimidazolium bromide $[C_{10}bim][Br]$ and 1-tetradecyl-3-butylimidazolium bromide $[C_{14}bim][Br]$ under the influence of streptomycin sulphate (SS) drug in 5 mM concentration in aqueous media. Imidazolium-based SAILs have unique physicochemical properties and greater surface activity than conventional surfactants, which allows them to increase drug permeability, making them better drug carriers than currently available formulations. To fully utilize $[C_{14}bim][Br]$ and $[C_{10}bim][Br]$ in drug delivery applications, deep insight into the interactions occurring in the mixed micellar $[C_{10}bim][Br]/[C_{14}bim][Br]$ systems in the drug's presence are necessary to be examined. Thus, the study is conducted using conductivity and surface tension measurement techniques to fully exploit the self-assembly, micellization behavior and interactions occurring in the pure and mixed micellar system of $[C_{10}bim][Br]/[C_{14}bim][Br]$ in water and 5 mM of SS solution in aqueous media. For this, various thermodynamic, surface-active and mixed micellar parameters of micellization have been calculated

and analyzed with respect to change in mole fraction, temperature and addition of SS in solution.

Keywords: aggregation; $[C_{10}bim][Br]$; $[C_{14}bim][Br]$; interfacial behavior; streptomycin sulphate; surface-active ionic liquid.

1 Introduction

Compared to individual surfactants, the superior activity and interesting properties such as solubilization, suspension, and dispersion of the surface-active mixed systems have led to the mixed micellar systems attracting strong and expanding scientific and industrial interest [1–4]. As a result, they are widely used in pharmaceutical formulations, as well as industrial preparations [5–7]. Many different mixed surfactant systems have been researched in recent years, including cationic surfactant/anionic surfactant, cationic surfactant/surface-active ionic liquid (SAIL), anionic surfactant/SAIL, nonionic surfactant/SAIL, and so on [8–10]. However, few reports are available for $SAIL_1/SAIL_2$ mixed systems, where $SAIL_1$ and $SAIL_2$ indicate two different surface-active ionic liquids. Imidazolium-based SAILs find applications in synthesis, catalysis, carbon capture, decontamination, water purification, enhanced oil recovery, and drug delivery [11–15].

Due to their unique physicochemical properties – they are liquid over a wide range, non-flammable, have excellent thermal stability, negligible vapour pressure and their high surface activity – SAILs have shown many potential applications in surface chemistry [16]. Long-chain alkyl groups present in SAILs make them amphiphilic, due to which SAILs undergo aggregation in an aqueous solution. SAILs have gotten a lot of interest as novel surfactants which can have a range of commercial applications [17–24]. The surfactant like the structure of SAILs allows them to position themselves at the air–water interface, resulting in the formation of micelles. Micelle formation takes place when the concentration

Harsh Kumar: Deceased.

*Corresponding author: Pooja Sharma, Department of Chemistry, Dr B R Ambedkar National Institute of Technology, Jalandhar, 144011, Punjab, India, E-mail: poojachem017@gmail.com

Gagandeep Kaur, Ramanjeet Kaur, Jasmeet Kaur and Harsh Kumar, Department of Chemistry, Dr B R Ambedkar National Institute of Technology, Jalandhar, 144011, Punjab, India,

E-mail: gagssethi13@gmail.com (G. Kaur), reehalraman@gmail.com

(R. Kaur), 26jasmeet@gmail.com (J. Kaur), h789.man@gmail.com (H. Kumar)

Harleen Singh, Department of Physics, Kanya Maha Vidyalaya, Jalandhar, 144011, Punjab, India, E-mail: hsssethi.11@gmail.com

Analyzing the modulations induced in the mixed micellar behavior of 1-alkyl-3-butylimidazolium based surface-active ionic liquids with an antibiotic drug in aqueous media

Gagandeep Kaur, Ramanjeet Kaur, Jasmeet Kaur, Harleen Singh, Harsh Kumar and Pooja Sharma 

From the journal *Tenside Surfactants Detergents*

<https://doi.org/10.1515/tsd-2023-2512>

Supplementary Materials

Cite this

Share

Harleen Singh 

Department of Physics, Kanya Maha Vidyalaya,
Jalandhar, 144011, Punjab, India

Search for this author in:

 De Gruyter |  Google Scholar

 You are currently not able to access this content.

Not sure if you should have access? Please log in using an institutional account to see if you have access to view or download this content.

For more information see <https://www.degruyter.com/how-access-works>

Showing a limited preview of this publication:

Abstract

The study aims to scrutinize the mixed micellization and interfacial behavior of two 1-alkyl-3-butylimidazolium based surface-active ionic liquids (SAILs) i.e., 1-decyl-3-butylimidazolium bromide $[C_{10}bim][Br]$ and 1-tetradecyl-3-butylimidazolium bromide $[C_{14}bim][Br]$ under the influence of streptomycin sulphate (SS) drug in 5 mM concentration in aqueous media. Imidazolium-based SAILs have unique physicochemical properties and greater surface activity than conventional surfactants, which allows them to

Investigation of Dysprosium-Incorporated Potassium Boro-Tellurite Glasses Toward Radiation Screening and Photonic Applications

Surbhi Sharma, Neetu Verma,* and Sandeep Kaur

A series of quaternary tellurite-based glasses $(72-x)\text{TeO}_2 + 25\text{B}_2\text{O}_3 + 3\text{K}_2\text{CO}_3 + x\text{Dy}_2\text{O}_3$, where $(x = 0, 0.5, 1, 1.5, 2, 2.5)$, are prepared using melt quenching technique. The effect of dopants on structural, physical, optical, and thermal properties of alkali boro-tellurite glasses are studied using the differential thermal analysis (DTA) technique, UV-vis spectrometer, and photoluminescence technique. The density of as-prepared samples has been obtained using the conventional Archimedes principle and other physical parameters, viz. molar volume and ion concentration, are also calculated using density. The optical absorption spectra exhibits different excited states of Dy^{3+} corresponding to ${}^6\text{H}_{15/2} \rightarrow {}^6\text{F}_{3/2}$ (~805 nm), ${}^6\text{F}_{3/2}$ (~755 nm), ${}^6\text{F}_{9/2}$ (~473 nm), ${}^4\text{H}_{13/2}$ (~454 nm), ${}^4\text{G}_{11/2}$ (~427 nm), ${}^4\text{F}_{7/2}$ (389 nm), ${}^4\text{F}_{3/2}$ (~366 nm). With the increase in Dy^{3+} concentration, an increase in optical bandgap, density, and molar volume as well as decrease in molar reflectivity, and reflection loss is evident from this study. The effect of Dy^{3+} ion concentration on Y/B intensity ratios and CIE chromaticity coordinates have been evaluated to understand the possible applications of aforementioned glass samples for white-light-emitting diodes (WLEDs). Moreover, various shielding parameters, viz. half value layer (HVL), mean free path (MFP), effective atomic number (Z_{eff}), mass attenuation coefficient (MAC) have also been determined to understand the shielding characteristics of as-prepared glass samples.

1. Introduction

Development in the field of solid-state lighting (SSL) technology has brought a revolution in the lighting industry. To meet the ever-increasing energy demands, noncrystalline materials doped with rare earth (RE) ions have drawn the interest of various researchers due to their extraordinary physical, chemical, and optical properties. Especially, advancement in the white-light-emitting diodes (WLEDs) technology is the key objective of researchers owing to its high efficiency, low power consumption, etc.^[1–6] Nowadays, due to advancements in fabrication techniques to produce materials with desired optical transparency,

density, and thermal stability, noncrystalline materials have also drawn the interest of researchers toward radiation shielding. Due to various limitations such as opaqueness, crack prone nature of conventional radiation shields made of high-density concrete and lead (Pb), such materials need to be replaced. Thus, there is a need to have transparent radiation shielders.

Glasses with tellurite as a host offers the lowest phonon energy (about 780 cm^{-1}) and are transparent in the visible, near, and mid-infrared spectral region (0.33–7.5 μm).^[7] In the field of photonics, low phonon energy materials are desirable as they enhance the fluorescence efficiency of RE ions on the account of reduced non-radiative decay rates.^[10a,12] Tellurites offer better chemical durability and lower scattering as well as absorption losses which make them a promising candidate for optical applications.^[1,3]

Meanwhile, the combination of TeO_2 and B_2O_3 will reduce hygroscopicity, broaden emission peaks, improve quantum yields, and depolymerization will make boro-tellurite glasses a viable candidate for a variety of optical and photonic applications.^[14–25] Incorporation of alkali metal oxides, viz. K_2CO_3 , Li_2CO_3 in the RE-doped boro-tellurite glasses reduces hygroscopicity, improves glass quality, and increases IR transmission.^[26,27] Trivalent RE elements exhibit luminescence over a wide range of wavelengths owing to their $4f$ or $4f5d$ energy states.^[28] Trivalent dysprosium (Dy^{3+}) ions are considered to have the potential for mid-infrared and white light emission and hence find applications in solid-state lasers, Q switching, fiber optics, and amplifiers in telecommunication.^[29–33] Trivalent dysprosium (Dy^{3+}) doped glasses show intense emission at blue (486 nm, ${}^6\text{F}_{9/2} \rightarrow {}^6\text{H}_{15/2}$) and yellow (578 nm, ${}^4\text{F}_{7/2} \rightarrow {}^4\text{H}_{13/2}$) wavelengths.^[7,12,33]

Recently Sathiyapriya et al.^[34] synthesized Dy^{3+} doped zinc barium boro-tellurite glasses and calculated shielding parameters like mean free path (MFP), Mass attenuation coefficient (MAC), and effective atomic number (Z_{eff}) to estimate the shielding ability of as prepared glasses. Similarly, Lakshminarayana et al.^[35] studied gamma ray attenuation characteristics of (Dy^{3+} , Er^{3+}) co-doped heavy metal boro-tellurite glasses and computed photon interaction parameters.

S. Sharma, N. Verma, S. Kaur
P.G. Department of Physics
Kanya Maha Vidyalaya
Jalandhar, Punjab 144004, India
E-mail: neetuverma75@yahoo.co.in

 The ORCID identification number(s) for the author(s) of this article can be found under <https://doi.org/10.1002/pssa.202200715>.

DOI: 10.1002/pssa.202200715



Journal of the Maharaja Sayajirao University of Baroda

UGC Care Listed Group-1 Journal
ISSN: 0025-0422

NEW EDUCATION POLICY 2020: INITIATIVES FOR CULTURAL AWARENESS

Ashima Sahni

Head dept. of Political Science, Kanya Maha Vidyalaya, (autonomous) College, Jalandhar,
Punjab, India

Dr. Palwinder Singh Bhatia

Assistant Professor, Dept. Mass Communication, Guru Nanak Dev University, Amritsar,
Punjab, India

ABSTRACT

The main focus of this study is on the New Education Policy 2020 (NEP) and its implications for promoting Indian culture in education. Through a comprehensive literature review, the authors analyze how this policy aims to establish a stronger connection between the present generation and the rich heritage of Indian culture, ancient wisdom, and traditional skills. The paper also explores the provisions of NEP 2020 for the preservation and promotion of endangered Indian languages, with special attention given to unscripted languages that face the risk of extinction. In addition, the authors provide valuable insights and suggestions for policymakers to effectively implement NEP 2020 and transform the education system to reflect Indian values, thoughts, and foster a sense of national integration.

OBJECTIVE OF THIS PAPER IS TO UNDERSTAND: -

- New Education Policy 2020
- Promotion of Indian Culture and National Integration through Education

KEYWORDS: NEP 2020, Art, culture, language.

METHODOLOGY

The methodology employed in this chapter is descriptive, analytical, and observational. The study relies on secondary data as its primary source. The secondary data used in this research consist of publicly available reports from various think tanks, such as the Centre for Policy Research, Delhi, and the Institute of Social Studies Trust (ISST), as well as government reports and documents. Additionally, the study incorporates data derived from existing literature, including books, journals, and online newspapers. The literature review encompasses relevant publications from 2020 to 2022, obtained from sources such as Google Scholar and Research Gate. The search terms "new education policy 2020" were utilized to identify articles published within the specified timeframe.

INTRODUCTION

The New Education Policy 2020 (NEP 2020) has a primary objective of fostering a nation-state that embraces and respects diverse conceptions of a fulfilling life. It acknowledges the importance of recognizing and respecting different cultures, understanding that diversity can thrive in such an environment. NEP 2020 seeks to transform the higher education system in

ROLE OF MEDIA IN HEALTH COMMUNICATION SYSTEM OF PUNJAB

Dr. Palwinder Singh Bhatia

Assistant Professor, Dept. Mass Communication, Guru Nanak Dev University, Amritsar,
Punjab, India

Ashima Sahni

Head dept. of Political Science, Kanya Maha Vidyalaya, (autonomous) College, Jalandhar,
Punjab (India)

Abstract

A sound health and effective mental care are essential part of nation state system. In-fact Economy and Social goal of any nation depends on the health of the people. Health is measured by different variables like access to quality health care, genetic inheritance and the factors comprised with the quality of water, air, environment conditions etc. However recent researches in related filed indicates correlation between mass media and health. Mass media plays very important role in diffusing health messages and generating awareness about health information which guides in attitude and behavior change of the audience to ascertain a good health. Thus, Mass media guides health officials to reach the general people, that is very important for health communication. Hence, mass media, radio, television, and online media are the useful ways to make up mind of the the target people to imbibe a new life-style and to alarm them with needful information because this is the only way which is used to pursued the public about a particular disease or epidemic. The current study intends to find out the level of awareness of health issues among the people and to find out the most effective mode of health communication. The present research leads to the findings that people of Punjab are aware of health issues but not fully aware about the health schemes initiated by government of India. The mainstream media like radio and television are doing very good job on national level to make people aware about government related schemes but local channels are least interested to do a job for health awareness. It has also come into light that private media is not very serious for spreading health related information.

Introduction

Health is a very significant topic which requires many debates and discussions in India. According to WHO, "The health of all the public is rudimental and fundamental to the achievement of tranquility and security and is based on the fullest co-operation of people and States".¹ In another definition, WHO mentions that health is a place of fully mental, physical and social well-being which is not just restricted to the absence of any illness. All the outcomes of medical, psychological and related knowledge are important to achieve absolute soundful health.² All we know, health is a subject of state, the execution of this is the accountability of the states. Inadequate availability of resources in states may affect the experimentation of the health policies.³ However, decentralization in health and development planning as explained under the Panchayati Raj Act gives an opportunity for participation of community in developmental programmes. The resources given to the health sector are an important factor in the health services in the nation, Outlays on health and health-related

¹ World Health Organisation (2018). Delivering quality health services: a global imperative for universal health coverage. ISBN 978-92-4-151390-6. 23-24.

² *ibid*

³ Annual Report (1997-98). Ministry of Health and Family Welfare, Government of India. New Delhi.

FEDERAL STRUCTURE, INTER-STATE RIVALRY AND SYL ISSUE IN PUNJAB:

EMERGING IMBROGLIO

Dr. Iqbal Singh¹
Ashima Sahni²
Dr. Prabhjot Kaur³

Abstract

The sharing of river waters became a bone of contention, despite the fact that Punjab literally means the 'land of five rivers', and as India's granary, it could ill afford the diversion of its waters elsewhere. After reorganization, Punjab became basically agricultural state, whose progress and prosperity was dependent upon the vagaries of nature. The joint control of the Bhakra Dam complex made the new state dependent upon the centrally-administered Board for its supply of power and water. During the decade of sixties, the Green Revolution increased the demand for water by farmers both in Punjab and Haryana. It lent a sharp new edge to the simmering canal waters' dispute between the two states. The Punjab's argument is that the issue of river water distribution should be addressed in consonance with the Riparian principle. Moreover, Punjab had also faced the severe crisis of river waters and wants to save the land from becoming a desert, whereas the condition of Haryana is equally bad. The Ravi, Beas and Sutlej Rivers all flow through Punjab, but an elaborate canal system channels off surplus water, sending it south to irrigate dry areas in Haryana and Rajasthan. The Inter-State and Centre-State differences necessitate frequent consultations and discussions for reaching acceptable solutions. The Dharam Yudd Morcha (religious crusade) by the Akalis in the context of digging of Sutlej-Yamuna Link canal and Rajiv-Longowal Accord has the serious implications in this regard. The water issues have become more sensitive. In the emerging circumstances, there is urgent need of national strategy on food security, soil preservation, sustainable water use and crop rotation. In this paper, an effort has been made to identify the major causes of SYL dispute in Punjab, and to find out the possible remedies for its earlier disposal.

Key words: Akali Dal, Federalism, Riparian Law, River water dispute, SYL.

Introduction

The political geography and history of the any region plays a crucial role in its governance. The ability of the founding fathers to adapt themselves to the new political context after the foundation of a regional state in the wake of the redrawing of India's internal boundaries by the States Reorganization Commission in 1957 is the crucial parameter for regional governance, which is an outcome of a diversity of historical contexts, elite initiatives and political pressures generated by local people.¹ The Inter-State and Centre-State differences necessitate frequent consultations and discussions for reaching acceptable solutions.² Punjab is predominantly the agriculture based

¹ Dr. Iqbal Singh, Assistant Professor, Department of Political Science, Kanya Maha Vidyalaya (Autonomous), Jalandhar, Punjab. Pin Code 144004, Contact: 79731-66337, Email: iqbalsingh2475@gmail.com

² Ashima Sahni, Assistant Professor & Head, Department of Political Science, Kanya Maha Vidyalaya (Autonomous), Jalandhar, Punjab. Pin Code 144004, Contact: 62840-83450, Email: sahnisahima1@gmail.com

³ Dr. Prabhjot Kaur, Assistant Professor, Department of Law, Guru Nanak Dev University, Amritsar, Punjab. Pin Code 143002, Contact: 70092-10963, Email: prabhjotpolsci@gmail.com

Effect of Social Media on Youngster's Food Choices

Palwinder Singh Bhatia¹ and Ashima Sahni²

¹Department Mass Communication, Guru Nanak Dev University, Amritsar, Punjab, India

²Department Political Science, Kanya MahaVidyalaya, (Autonomous College), Jalandhar, Punjab, India

ABSTRACT

Social media provides a platform for communication, interaction, and sharing of ideas and information through videos, images, and messages building a virtual networking community. Facebook, Twitter, Snapchat, and Instagram are a few of the social media sites that are commonly used by the younger population. The influence of social media on individuals and the norm for beauty standards have led to the development of dieting resulting in changes in eating behaviour. In order to improve the health status of youngsters, studies are needed to illuminate the essence of their general and dietary lifestyle. Thus, this study verifies meaningful relationships between youngsters' usage of social media (USM), which plays an important role in their life, their food consumption behavior (FCB), and their dietary satisfaction. The purpose of this study was to find out how social media affects eating behaviour of youth. Hence, the aim was to understand the possible effects of social media on eating behaviour in youngsters and how this behaviour leads to positive and negative effects on their health. To find out the real facts and causes behind eating behaviour a review of the literature of articles published from journal inception to 2019 was performed by searching PubMed (i.e., MEDLINE), Embase, CINAHL, PsycINFO, Web of Science, and other databases. The review was conducted in three steps: (1) identification of the research question and clarification of criteria using the population, intervention, comparison, and outcome (PICO) framework; (2) selection of articles from the literature using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines; and (3) charting and summarizing information from selected articles. PubMed's Medical Subject Headings (MeSH) and Embase's Emtree subject headings were reviewed along with specific keywords to construct a comprehensive search strategy.

Keywords: food consumer, eating behaviour, youth health, food consumption pattern, sound eating, convenience food

INTRODUCTION

Eating behaviour is a broad term that encompasses food choices and motives, feeding practices, dieting and eating-related problems such as obesity, eating disorders and feeding disorders¹. With growing technology, life has become easier and better for all people. The advancement in technology day by day and excessive use of social media has both positive and negative effects. Social media has become famous nowadays and no one can stay away from it. All around the world in every 60 seconds 156 million emails are sent, 3.8 million search requests are made from Google and 2 million minutes of calls are made via Skype. The study has shown that 70% of 17–22-year old youngsters have a profile on social media, while the OECD (Organisation for Economic Co-operation and Development) reported in 2015 has shown that 94.8% of 17-year-old children in the UK used social media.²

Social media has been defined as any social networking site that enables interactive, user-generated content that allows sharing of images, ideas, videos, music, or commentary on internet forums (e.g., Facebook), blogs and microblogs (e.g., Twitter), and photograph- or video-hosting platforms (e.g., Instagram, YouTube, or TikTok)³. Individuals or groups of people can communicate, collaborate, and connect in real time via text, video, or phone anywhere that Wi-Fi is available. Social media channels, such as Facebook or YouTube, were initiated in the year early 2000. However, the first website recognized as being the first social media platform was called *Six Degrees*—short for Six Degrees of Separation—and it launched in 1997. In 2018, YouTube, Instagram, and Snapchat were identified as the most popular online platforms utilized even by teens 13 to 17 years of age⁴. User-generated content on these channels may allow for autonomy, identity, and interpersonal peer relationship development, a hallmark of youngsters⁵. Social media is an effective channel for engaging youngsters, a target population that has been hard to engage in public health practice. It can be used to influence, inform, and persuade. Social media mobile apps have global reach, use, and engagement⁶. In an earlier global report, approximately 85% of youngsters between the ages of 17 and 24 years across Europe, Latin America, the United States, and South Korea reported using a social media website⁶. Among a sample of 4460 high school students from Turkey in 2019, 88% owned a smartphone and 100% had a social media account⁸. Out of this sample 75% of students influenced by the food-related content through advertisements, blogs and articles in different social networking sites. All the junk food items like pizza, burger, pasta, cakes, chocolate and burger

GURDWARA REFORM MOVEMENT, AKALI AGITATION AND IDENTITY POLITICS IN PUNJAB: GENESIS, GROWTH AND CHANGING TRENDS

Dr. Iqbal Singh, Assistant Professor, Department of Political Science, Kanya Maha Vidyalaya (Autonomous), Jalandhar, Punjab. Pin Code 144004, Email:iqbalsingh2475@gmail.com

Ashima Sahni, Assistant Professor & Head, Department of Political Science, Kanya Maha Vidyalaya (Autonomous), Jalandhar, Punjab. Pin Code 144004, Email:sahnisahimal@gmail.com

Dr.Prabhjit Kaur, Assistant Professor, Department of Laws, Guru Nanak Dev University, Amritsar, Punjab. Pin Code 143002, Email: prabhjotpolsci@gmail.com

Abstract

The purpose of Gurdwara Reform movement was to bring the reforms in the affairs of gurdwaras. The condition of the Gurdwaras was despondent under the Mahants. Through the peaceful protest, the Akalis shaped the national discourse. The formation of Akali Dal as a mainstream political organization, its role in pre and post partition phase, Akali Agitation and Identity politics are reviewed through social and historical context of Punjab. Akali leadership striving to established its credentials as the regional political party; committed to promote the socio, economic and political interests of the people of Punjab. This paper traces the origin and growth of Gurdwara Reform movement, which meant for bringing the reforms in Sikh shrines. The changing patterns, variables and trends of Akali agitation and identity politics are taken into consideration. An attempt has been made to explore the insights on the dominant factors of present day politics of Punjab and its ramifications.

Keywords: Akali Dal, Gurdwara Reform Movement, Identity Politics, Mahant, SGPC.

Introduction and Historical Background

The Gurdwara Reform movement began in undivided Punjab in the beginning of twentieth century. The primary objective of the movement was to break the stranglehold of the *mahants*[¶] on gurdwaras since they had acquired a reputation for corruption and misuse of their position for personal gratification (Thakurta and Raghuraman, 2007, 362). The *mahants* were not the baptized Sikhs. The Shiromani Akali Dal was formed as the political organization in 1920. The purpose was to lead the agitation for wresting control of the Sikh gurdwaras from hereditary *mahants* in a prolonged, but non-violent struggle. The Akalis could be regarded among the pioneers of the *satyagraha* (insistence on truth) mode of India's freedom struggle (Dhillon, 2006, 25). The Sikh Gurdwara Act of 1925, which passed the control of Sikh temples to an elected body called the *Shiromani Gurdwara*



ISSN : 2395-1273

ਸੰਵਾਦ

17 ਜਨਵਰੀ-ਜੂਨ 2023
ਵਾਂ ਅੰਕ
www.sanvad.org

ਇਸ ਅੰਕ ਵਿਚ

- ਆਧੁਨਿਕਤਾ ਤੇ ਆਧੁਨਿਕ ਕਾਵਿ-ਸੰਵੇਦਨਾ
- ਬਹੁ ਅਤੇ ਪਾਰ- ਰਾਸ਼ਟਰੀ ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ
- ਭਾਈ ਵੀਰ ਸਿੰਘ : ਸਾਹਿਤਕਾਰੀ ਦਾ ਯੁੱਗ ਪੁਰਸ਼
- ਪੰਜਾਬੀ ਵੈੱਬਸਾਈਟਾਂ 'ਤੇ ਸ਼ਬਦ-ਜੋੜਾਂ ਦੀਆਂ ਗ਼ਲਤੀਆਂ : ਸਰਵੇਖਣ ਅਤੇ ਵਿਵੇਚਨ
- 'ਮੱਧਮ-ਮੱਧਮ': ਨਾਰੀ-ਮਨ ਦੀਆਂ ਅਕਾਂਖਿਆਵਾਂ ਦਾ ਕਾਵਿਕ ਪੈਰਾਡਾਈਮ
- ਕਿਸਾਨ ਅੰਦੋਲਨ: ਨਵੀਂ ਰਾਜਨੀਤਕ ਚੇਤਨਾ ਦਾ ਆਗਮਨ
- ਹਰਿਭਜਨ ਸਿੰਘ ਰਚਿਤ ਦੀਰਘ ਕਾਵਿ 'ਰੁੱਖ ਤੇ ਰਿਸ਼ੀ' ਰੂਪਕਾਰਕ ਅਧਿਐਨ
- ਬਹੁ-ਸਭਿਆਚਾਰਵਾਦ ਅਤੇ ਅਜੋਕਾ ਪੰਜਾਬੀ ਪਰਵਾਸ
- ਯੁਵਾ ਪੰਜਾਬੀ ਪਰਵਾਸ ਦਾ ਪੰਜਾਬੀ ਸਮਾਜ-ਸਭਿਆਚਾਰ ਉੱਪਰ ਪ੍ਰਭਾਵ
- ਪੰਜਾਬ ਦਾ ਗੁੱਜਰ ਕਬੀਲਾ: ਸਮਾਜ ਸਭਿਆਚਾਰਕ ਪਰਿਪੇਖ
- ਪੰਜਾਬ ਦਾ ਗੁੱਜਰ ਕਬੀਲਾ: ਸਮਾਜ ਸਭਿਆਚਾਰਕ ਪਰਿਪੇਖ
- ਸਿੱਖਿਆ ਦਾ ਬਦਲਦਾ ਰੂਪ : ਨਵੀਂ ਸਿੱਖਿਆ ਨੀਤੀ ਦੇ ਸੰਦਰਭ ਵਿਚ
- ਨਵੀਆਂ ਵੰਗਾਰਾਂ, ਚੁਣੌਤੀਆਂ ਤੇ ਵਿਰੋਧਤਾਈਆਂ ਬਨਾਮ ਸੰਵਾਦਕ ਕਾਵਿਕ ਪ੍ਰਵਚਨ
- ਬੁੱਲ੍ਹੇ ਸਾਹ ਦੀ ਕਵਿਤਾ ਵਿਚ ਪ੍ਰਗੀਤਕ ਤੌਰ
- ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦਾ ਗੀਤਾ ਸੰਗ ਸੰਵਾਦ
- ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ ਦੀਆਂ ਕਹਾਣੀਆਂ ਵਿਚ ਪੇਸ਼ ਬਿੰਬਾਂ ਦਾ ਇਕੱਤਰੀਕਰਨ ਅਤੇ ਅਧਿਐਨ
- ਪੰਜਾਬੀ ਲੋਕਚਿਕਿਤਸਾ ਅਧਿਐਨ : ਪਰੰਪਰਾ ਤੇ ਸਮਕਾਲ
- ਪੰਜਾਬ ਦੇ ਨਵੇਂ ਧਾਰਮਿਕ ਰੁਝਾਨ : 21ਵੀਂ ਸਦੀ ਵਿਚ ਵਿਚਰਦਿਆਂ
- ਅਜਮੇਰ ਸਿੱਧੂ ਦਾ ਕਥਾ ਜਗਤ: ਸਮਾਜ-ਸਭਿਆਚਾਰਕ ਸਰੋਕਾਰ
- ਪੁਸਤਕ ਗੀਵਿਊ



ESTD. 1892

ਪੰਜਾਬੀ ਅਧਿਐਨ ਵਿਭਾਗ
ਖ਼ਾਲਸਾ ਕਾਲਜ ਅੰਮ੍ਰਿਤਸਰ



ਪੰਜਾਬ ਦਾ ਗੁੱਜਰ ਕਬੀਲਾ ਸਮਾਜ ਸਭਿਆਚਾਰਕ ਪਰਿਪੇਖ

'ਕਬੀਲਾ' ਅੰਗਰੇਜ਼ੀ ਸ਼ਬਦ ਟਰਾਈਬ (Tribe) ਦਾ ਪੰਜਾਬੀ ਅਨੁਵਾਦ ਹੈ। ਕਬੀਲਾ ਇਕ ਅਜਿਹਾ ਸਮਾਜਿਕ ਸਮੂਹ ਹੁੰਦਾ ਹੈ, ਜਿਸਦੇ ਮੈਂਬਰ ਇਕ ਸਾਂਝੀ ਉਪਭਾਸ਼ਾ ਬੋਲਦੇ ਹਨ, ਜਿਨ੍ਹਾਂ ਦਾ ਆਪਣਾ ਵਿਧਾਨ ਤੇ ਆਪਣੇ ਕਾਨੂੰਨ ਹੁੰਦੇ ਹਨ।¹ ਕਬੀਲਾ ਉਨ੍ਹਾਂ ਲੋਕਾਂ ਨੂੰ ਕਿਹਾ ਜਾਂਦਾ ਹੈ ਜੋ ਕਿਸੇ ਸਾਂਝੇ ਇਲਾਕੇ ਵਿਚ ਵਸਦੇ ਹੋਣ, ਜਿਨ੍ਹਾਂ ਦੀਆਂ ਆਪਣੀਆਂ ਵੱਖਰੀਆਂ ਰਸਮਾਂ ਰੀਤਾਂ ਹੋਣ।² ਵੱਖਰੀਆਂ-ਵੱਖਰੀਆਂ ਪਰਿਭਾਸ਼ਾਵਾਂ ਦੇ ਆਧਾਰ 'ਤੇ ਕਬੀਲੇ ਦੇ ਕੁਝ ਸਾਂਝੇ ਲੱਛਣ ਨਿਰਧਾਰਿਤ ਕੀਤੇ ਜਾ ਸਕਦੇ ਹਨ, ਜਿਸ ਆਧਾਰ 'ਤੇ ਕਿਸੇ ਕਬੀਲੇ ਦੀ ਪਹਿਚਾਣ ਕੀਤੀ ਜਾ ਸਕਦੀ ਹੈ:



ਡਾ. ਹਰਪ੍ਰੀਤ
ਐਸੋਸੀਏਟ ਪ੍ਰੋਫੈਸਰ
ਕੰਨਿਆ ਮਹਾਵਿਦਿਆਲਾ
ਜਲੰਧਰ
84275-55520

ਕਬੀਲੇ ਦਾ ਇਕ ਸਾਂਝਾ ਇਲਾਕਾ, ਇਕ ਸਾਂਝੀ ਉਪਭਾਸ਼ਾ, ਆਪਣਾ ਸ਼ਾਸਨ ਅਤੇ ਨਿਆਂ ਪ੍ਰਬੰਧ ਹੁੰਦਾ ਹੈ। ਇਸ ਸ਼ਾਸਨ ਨੂੰ ਚਲਾਉਣ ਵਾਸਤੇ ਕਬੀਲੇ ਦਾ ਸਰਦਾਰ ਅਤੇ ਇਕ ਪੰਚਾਇਤ ਵੀ ਹੁੰਦੀ ਹੈ, ਜੋ ਸਮੂਹ ਕਬੀਲੀਆਂ ਦੇ ਸੰਗਠਨ ਨੂੰ ਨਜਿੱਠਦੀ ਹੈ। ਅੰਤਰ-ਜਾਤੀ ਵਿਆਹ ਕਬੀਲੇ ਦਾ ਵਿਸ਼ੇਸ਼ ਲੱਛਣ ਹੁੰਦਾ ਹੈ। ਹਰ ਕਬੀਲੇ ਦੇ ਆਪਣੇ-ਆਪਣੇ ਰਸਮ-ਰਿਵਾਜ ਹੁੰਦੇ ਹਨ। ਕਬੀਲੇ ਦਾ ਇਕ ਸਾਂਝਾ ਵਿਰਸਾ ਹੁੰਦਾ ਹੈ। ਕਬੀਲੇ ਦੀ ਵਿਲੱਖਣਤਾ ਸਾਂਝੇ ਕਾਰਜਾਂ ਕਰਕੇ ਹੁੰਦੀ ਹੈ। ਕਬੀਲੇ ਵਿਚ ਮਨਾਹੀਆਂ ਬਹੁਤ ਸਖਤੀ ਨਾਲ ਲਾਗੂ ਕੀਤੀਆਂ ਜਾਂਦੀਆਂ ਹਨ।³



ਡਾ. ਦਵਿੰਦਰ ਕੌਰ
ਅਸਿਸਟੈਂਟ ਪ੍ਰੋਫੈਸਰ
ਕੰਨਿਆ ਮਹਾਵਿਦਿਆਲਾ

ਕਬੀਲਾ ਸਮਾਜ ਦੀ ਭਾਸ਼ਾ, ਕਿੱਤਾ ਅਤੇ ਪਹਿਰਾਵਾ ਵੱਖਰਾ ਹੋਣ ਕਰਕੇ ਹੀ ਇਸ ਸਮਾਜ ਨੇ ਆਪਣੀ ਵੱਖਰੀ ਹੋਂਦ ਤੇ ਪਛਾਣ ਨੂੰ ਕਾਇਮ ਰੱਖਿਆ ਹੋਇਆ ਹੈ। ਕਬੀਲਾ ਅਧਿਐਨ (Tribal Studies) ਸਮਾਜ ਵਿਗਿਆਨ ਦੇ ਅੰਤਰਗਤ ਅਧਿਐਨ ਦਾ ਇਕ ਨਵਾਂ ਖੇਤਰ ਹੈ। ਟਰਾਈਬਲ ਸਟੱਡੀਜ਼ ਨੇ ਵਿਸ਼ਵ ਪੱਧਰ 'ਤੇ ਅਧਿਐਨ ਖੇਤਰ ਵਿਚ ਵੱਡਾ ਮੋੜ ਲਿਆਂਦਾ ਹੈ। ਅਜਿਹੇ ਅਧਿਐਨ ਨਾਲ ਮਨੁੱਖੀ ਸਭਿਆਚਾਰ ਦੀਆਂ ਜੜ੍ਹਾਂ ਦੀ ਤਲਾਸ਼ ਕੀਤੀ ਜਾ ਸਕਦੀ ਹੈ। ਇਸ ਅਧਿਐਨ ਰਾਹੀਂ ਪਛੜੇ ਸਮਝੇ ਜਾਂਦੇ ਕਬੀਲਾ ਸਮਾਜਾਂ ਦੀ ਬਣਤਰ, ਜੀਵਨ-ਜਾਚ ਅਤੇ ਕਦਰਾਂ-ਕੀਮਤਾਂ ਨੂੰ ਸਮਝਿਆ ਜਾ ਸਕਦਾ ਹੈ। ਆਪਣੇ ਮਾਨਵੀ ਸੁਭਾਅ ਕਰਕੇ ਇਹ ਕਬੀਲੇ ਸਭਿਅਕ ਸਮਾਜਾਂ ਲਈ ਦਰਪਣ ਬਣ ਸਕਦੇ ਹਨ। ਇਹ ਕਬੀਲੇ ਆਧੁਨਿਕ ਜੀਵਨ ਤੋਂ ਦੂਰ ਹੋਣ ਦੇ ਬਾਵਜੂਦ ਆਰਥਿਕ ਸ਼ੋਸ਼ਣ ਨੂੰ ਜਨਮ ਦੇਣ ਵਾਲੀਆਂ ਸੰਸਥਾਵਾਂ ਅਤੇ ਸਮਾਜਕ ਉਚ-ਨੀਚ ਵਾਲੀ ਜਾਤ-ਪਾਤੀ ਪ੍ਰਣਾਲੀ ਤੋਂ ਵੀ ਮੁਕਤ ਹਨ। ਇਨ੍ਹਾਂ ਕਬੀਲਿਆਂ ਦੀ ਔਰਤ ਅਨਪੜ੍ਹ ਹੋਣ ਦੇ ਬਾਵਜੂਦ ਸਭਿਅਕ ਸਮਾਜ ਦੀ ਇਸਤਰੀ ਦੇ ਮੁਕਾਬਲੇ ਵਧੇਰੇ ਗੌਰਵਸ਼ਾਲੀ ਸਥਿਤੀ ਵਿਚ

ISSN:2231-6930

89

ਪ੍ਰਵਚਨ



ਅਕਤੂਬਰ-ਦਸੰਬਰ, 2022

ਮੁੱਲ 75 ਰੁਪਏ

‘ਪ੍ਰਵਚਨ’ ਸਾਹਿਤ, ਸਮੀਖਿਆ ਤੇ ਸੱਭਿਆਚਾਰ ਨੂੰ ਸਮਰਪਿਤ, ਯੂ.ਜੀ.ਸੀ.
ਕੇਅਰ ਲਿਸਟ ਅਨੁਸਾਰ ਪ੍ਰਵਾਨਿਤ ਤ੍ਰੈ-ਮਾਸਿਕ ਪਤ੍ਰਿਕਾ
ਸਾਲ : 22 ਪੁਸਤਕ ਲੜੀ : 89 ਅਕਤੂਬਰ-ਦਸੰਬਰ, 2022

ਬਾਨੀ ਸੰਪਾਦਕ: ਡਾ. ਰਜਨੀਬ ਬਹਾਦਰ ਸਿੰਘ
ਮੁੱਖ ਸੰਪਾਦਕ: ਡਾ. ਕੁਲਵੰਤ ਸਿੰਘ
124, CHHOTI BARADARI-II
Jalandhar-144001
Mob: 98722-44885
pravachanpunjabi@gmail.com
www.pravachan.org
ਸੰਪਾਦਕ: ਡਾ. ਰਮਿੰਦਰ ਕੌਰ
Mob: 94172-75147
ਸਲਾਹਕਾਰ ਬੋਰਡ
ਡਾ. ਰਵੀ ਰਵਿੰਦਰ (ਦਿੱਲੀ ਯੂਨੀਵਰਸਿਟੀ)
ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ (ਪਟਿਆਲਾ)
ਡਾ. ਮਹਿਲ ਸਿੰਘ (ਅੰਮ੍ਰਿਤਸਰ)
ਡਾ. ਜਨਮੀਤ, ਡਾ. ਜਸ ਮੰਡ
ਸੁਕੀਰਤ
ਡਾ. ਹਰਭਜਨ ਸਿੰਘ ਢਿੱਲੋਂ (ਕੋਲਗਰੀ)
ਡਾ. ਪਰਮਜੀਤ ਕੌਰ ਸਿੰਘ
(ਕੁਰੂਕਸ਼ੇਤਰ ਯੂਨੀਵਰਸਿਟੀ)
ਸੰਤੋਖ ਧਾਲੀਵਾਲ (ਯੂ. ਕੇ.)
ਬਲਬੀਰ ਪਰਵਾਨਾ
ਰਾਹੁਲ ਸਿੰਘ

ਸਰਵਰਕ: ਜਸ ਮੰਡ

ਦੀਦਿਆਂ ਦਾ ਵੇਰਵਾ:

India	Rs. 75 Per Issue Rs.1500 Per 5 Years
U.K.	£20 Per Year £100 Per 5 Years
U.S.A./	\$40 Per Year \$160 Per 5 Years.
Canada	\$40 Per Year \$200 Per 5 Years.

ਅੰਦਰ ਪੜ੍ਹੋ

- ਪੰਜਾਬੀ ਸਾਹਿਤ ਤੇ ਪ੍ਰਗਤੀਵਾਦੀ ਚਿੰਤਨ: ਪੁਨਰ ਮੁਲਾਂਕਣ ਦਾ ਮਸਲਾ -ਕੁਲਵੰਤ ਸਿੰਘ ਸੰਪੂ/2
- ਕਵਿਤਾਵਾਂ: ਮਨੋਜ ਸ਼ਰਮਾ, ਕੁਲਵਿੰਦਰ ਚਾਵਲਾ, ਡਾ. ਨਿਰੰਜਨ, ਜਸਪਾਲ ਘਈ, ਵਾਹਿਦ ਸੁਨਾਮ/4
- ਕਹਾਣੀ-ਕਲਬੁਤ/ਪ੍ਰੇਮ ਮਾਨ/24
- ਕਹਾਣੀ-ਸ਼ਾਮ ਸਿੰਘ ਦੀ ਰਾਤ -ਕੁਲਜੀਤ ਮਾਨ/51
- ਕਈ ਰੰਗਾਂ ਵਿੱਚ ਰੰਗਿਆ ਚਾਚਾ ਜਗੀਰਾ -ਅਵਤਾਰ ਸਿੰਘ ਬਿਲਿੰਗ/63
- ਮਨਮੋਹਨ ਬਾਵਾ ਦੀ ਸਵੈ ਜੀਵਨੀ -ਸੁਕੀਰਤ/69
- ਸਾਹਿਤ ਪਰਖ ਤੇ ਲੇਖਕ ਦੀ ਭੂਮਿਕਾ: ਇਕ ਵਿਸ਼ਲੇਸ਼ਣ/ਡਾ. ਸਰਬਜੀਤ ਕੌਰ/77
- ਨਾਰੀ ਵੇਦਨਾ, ਸੰਵੇਦਨਾ ਅਤੇ ਚੇਤਨਾ ਦੀਆਂ ਕਹਾਣੀ-ਸੀਤੇ ਬੁੱਲ੍ਹਾਂ ਦਾ ਸੁਨੇਹਾ -ਗੁਰਵਿੰਦਰ ਸਿੰਘ/86
- ਈ ਲੋਕ ਧਾਰਾ: ਸੁਹਾਗ ਲੋਕ ਗੀਤ -ਡਾ. ਗੀਨਾ ਕੁਮਾਰੀ, ਮਿਸ ਸੀਮਾ ਕੁਮਾਰੀ/95
- ਮੇਰੇ ਪੁਸਤਕ ਰਖਨੇ ਤੋਂ: ਮਹਾਰਾਜੇ ਦਾ ਜਾਣਕਾਰੀ ਗੁੱਚ ਸਵਰਨਾਮਾ/ਜਸ ਮੰਡ/99
- ਸਮਕਾਲੀ ਸਾਹਿਤ ਨੂੰ ਵਾਚਦਿਆਂ -ਕੁਲਵੰਤ ਸਿੰਘ ਸੰਪੂ/104
- ਪਾਠਕ ਪ੍ਰਤੀਕਿਰਿਆ/108

- ← ਸੰਪਾਦਕੀ ਬੋਰਡ ਦਾ ਲੇਖਕ ਦੇ ਵਿਚਾਰਾਂ ਨਾਲ ਸਹਿਮਤ ਹੋਣਾ ਜ਼ਰੂਰੀ ਨਹੀਂ।
- ← ਨੋਟ: ਚੰਦੇ ਕੇਵਲ ਚੈੱਕ ਜਾਂ ਡਰਾਫਟ ਰਾਹੀਂ ਸੰਪਾਦਕ KULWANT SINGH ਦੇ ਨਾਂ ਭੇਜੇ ਜਾਣ।
- ← ਪਰਚਾ ‘ਪ੍ਰਵਚਨ’ ਜਸਵਿੰਦਰ ਸਿੰਘ ਮੰਡ ਨੇ Bright Printing Press, Mohalla Kishanpura, Jalandhar ਤੋਂ ਛਪਵਾ ਕੇ ਪਿੰਡ-ਮੰਡ ਮੋੜ, ਡਾਕਖਾਨਾ: ਕਰਤਾਰਪੁਰ, ਜ਼ਿਲ੍ਹਾ ਜਲੰਧਰ-144801 ਤੋਂ ਪ੍ਰਕਾਸ਼ਤ ਕੀਤਾ।
- ← ਟਾਈਪ ਸੈਟਿੰਗ ਤੇ ਡਿਜ਼ਾਇਨ: 5ਆਬ ਪ੍ਰਕਾਸ਼ਨ, ਦੇਸ਼ ਭਗਤ ਯਾਦਗਾਰ ਬਿਲਡਿੰਗ, ਜਲੰਧਰ, ਫੋਨ: 98140-87063

ਈ- ਲੋਕਧਾਰਾ : ਸੁਹਾਗ ਲੋਕ ਗੀਤ

ਡਾ. ਗੀਤਾ ਕੁਮਾਰੀ
ਮਿਸ ਸੀਮਾ ਕੁਮਾਰੀ

ਆਧੁਨਿਕ ਸਮੇਂ ਵਿੱਚ ਪ੍ਰਚਲਿਤ ਅਤੇ ਸਥਾਪਤ ਹੋਣ ਵਾਲੇ ਦੂਸਰੇ ਸਮਾਜਕ ਵਿਗਿਆਨਾਂ ਜਾਂ ਅਨੁਸ਼ਾਸਨਾਂ ਵਾਂਗ 'ਲੋਕਧਾਰਾ' ਨਾਂ ਦਾ ਅਨੁਸ਼ਾਸਨ ਵੀ ਆਧੁਨਿਕ ਭਾਰਤੀ ਭਾਸ਼ਾਵਾਂ ਅੰਦਰ ਪੱਛਮੀ ਚਿੰਤਨਧਾਰਾ ਦੇ ਪ੍ਰਭਾਵ ਅਧੀਨ ਹੀ ਅਪਨਾਇਆ ਤੇ ਸਥਾਪਤ ਹੋਇਆ ਹੈ। ਲੋਕਧਾਰਾ ਨੂੰ ਹੁਣ ਤੱਕ ਇੱਕ ਅਜਿਹਾ ਵਿਗਿਆਨ ਮੰਨਿਆ ਗਿਆ ਹੈ ਜੋ ਕਿਸੇ ਜਾਤੀ ਸਮੂਹ ਦੀ ਲੋਕਧਾਰਾ ਨਾਲ ਸਬੰਧਤ ਸਮੱਗਰੀ ਨੂੰ ਇਕੱਠਾ ਕਰਕੇ ਉਸ ਦਾ ਵਰਗੀਕਰਨ ਅਤੇ ਵਿਸ਼ਲੇਸ਼ਣ ਕਰਕੇ ਉਸ ਜਨ ਸਮੂਹ ਦੇ ਸਮਿਆਂ ਵਿਚ ਫੈਲੇ ਸੱਭਿਆਚਾਰ ਨੂੰ ਸਮਝਣ ਦਾ ਯਤਨ ਕਰਦਾ ਹੈ। ਇਸ ਤਰ੍ਹਾਂ ਲੋਕਧਾਰਾ ਸਮੱਗਰੀ ਵੀ ਹੈ ਅਤੇ ਵਿਗਿਆਨ ਵੀ। ਸ਼ਾਮਦ ਵਿੱਚ ਭਾਵੇਂ ਲੋਕਧਾਰਾ ਦੇ ਅਧਿਐਨ ਲਈ ਸ਼ਬਦ 'ਫੋਕਲੋਰਿਸਟਿਕਸ' ਵੀ ਵਰਤਿਆ ਜਾਣ ਲੱਗ ਪਿਆ। ਲੋਕਧਾਰਾ ਦੇ ਵਿਸ਼ੇ ਖੇਤਰ ਵਿਚ ਅਸੀਂ ਮੁੱਖ ਤੌਰ ਤੇ ਲੋਕ ਸਾਹਿਤ ਦੀਆਂ ਵੰਨਗੀਆਂ (ਮਿੱਥ, ਦੇਵ ਕਥਾਵਾਂ, ਲੋਕ ਕਹਾਣੀ, ਬਿਰਤਾਂਤਕ ਟੈਟਕੇ, ਚੁਟਕਲੇ, ਲੋਕ ਗੀਤਾਂ ਦੀਆਂ ਵੰਨਗੀਆਂ) ਲੋਕ ਕਲਾ, ਲੋਕ ਵਿਸ਼ਵਾਸ, ਗੀਤਾਂ ਰਸਮਾਂ, ਲੋਕ ਖੇਡਾਂ, ਲੋਕ ਚਿੱਤਰਕਾਰੀ, ਲੋਕ ਪਹਿਰਾਵਾ ਆਦਿ ਨੂੰ ਸ਼ਾਮਲ ਕਰਦੇ ਹਾਂ। ਕੁਝ ਪੱਛਮੀ ਵਿਦਵਾਨ ਪੂਰੇ ਲੋਕ ਜੀਵਨ ਨੂੰ ਹੀ ਲੋਕਧਾਰਾ ਦੀ ਅਧਿਐਨ ਵਸਤੂ ਮੰਨ ਕੇ ਇਸ ਦੇ ਵਿਸ਼ੇ ਖੇਤਰ ਨੂੰ ਹੋਰ ਮੋਕਲਾ ਕਰਨ ਦੀ ਵਕਾਲਤ ਵੀ ਕਰਦੇ ਹਨ।

ਅਜੋਕੇ ਯੁੱਗ ਵਿੱਚ ਤਕਨੀਕੀ ਕ੍ਰਾਂਤੀ ਨੇ ਮਨੁੱਖੀ ਜ਼ਿੰਦਗੀ ਨੂੰ ਬਦਲ ਕੇ ਰੱਖ ਦਿੱਤਾ ਹੈ। ਬਿਜਲਈ ਸਾਧਨਾਂ ਦੀ ਬਹੁਤਾਤ ਹੈ ਜੋ ਕਿ ਮਾਨਵ ਜੀਵਨ ਦੇ ਵਿਕਾਸ ਵਿੱਚ ਅਹਿਮ ਭੂਮਿਕਾ ਨਿਭਾ ਰਹੇ ਹਨ। ਇਨ੍ਹਾਂ ਸੰਚਾਰ ਸਾਧਨਾਂ ਦੁਆਰਾ ਸਿਰਜੀ ਜਾ ਰਹੀ ਲੋਕਧਾਰਾ ਨੂੰ ਈ - ਲੋਕਧਾਰਾ ਕਿਹਾ ਜਾਂਦਾ ਹੈ। ਇਨ੍ਹਾਂ ਸੰਚਾਰ ਸਾਧਨਾਂ ਵਿਚ ਟੀ. ਵੀ, ਰੇਡੀਓ, ਕੰਪਿਊਟਰ, ਮੋਬਾਇਲ ਫੋਨ, ਲੈਪਟੋਪ, ਇੰਟਰਨੈੱਟ ਟੈਬਲੇਟ ਆਦਿ ਨੇ ਪੂਰੀ ਦੁਨੀਆਂ ਨੂੰ ਆਪਣੀ ਗਲਵੱਕੜੀ ਵਿੱਚ ਲਿਆ ਹੈ। ਸੋਸਲ ਮੀਡੀਆ ਦੇ ਕਈ ਰੂਪਾਂ ਜਿਨ੍ਹਾਂ ਵਿੱਚ ਸਮਾਜਕ ਬਲਾਗ, ਸੋਸਲ ਨੈੱਟਵਰਕ, ਵੈੱਬ ਬਲਾਗ ਆਦਿ ਆ ਜਾਂਦੇ ਹਨ ਜਿਵੇਂ :- ਫੇਸਬੁੱਕ, ਵਟਸਐਪ, ਟਵਿੱਟਰ, ਹਾਇਕ, ਯੂ ਟਿਊਬ ਆਦਿ ਸੋਸਲ ਐਪ ਨਵੀਂ ਲੋਕਧਾਰਾ ਪੈਦਾ ਅਤੇ ਪ੍ਰਸਾਰਿਤ ਵੀ ਕਰ ਰਹੀਆਂ ਹਨ। ਵੇਸਬੁੱਕ ਤੇ ਬਣੇ ਗਰੁੱਪ ਅਤੇ ਵੈੱਬ ਪੇਜ ਲੋਕਧਾਰਾ ਦੀਆਂ ਵੱਖ-ਵੱਖ ਵੰਨਗੀਆਂ ਪ੍ਰਸਾਰਿਤ ਕਰ ਰਹੇ ਹਨ। ਇਨ੍ਹਾਂ ਸੰਚਾਰ ਸਾਧਨਾਂ ਦੀ ਆਮਦ ਤੋਂ ਪਹਿਲਾਂ ਮਨੁੱਖੀ ਸਿਰਜਣਾ ਦੇ ਪੱਖ ਜਾਹਰ ਨਹੀਂ ਸੀ ਹੁੰਦੇ, ਹੁਣ ਇਨ੍ਹਾਂ ਸੰਚਾਰ ਸਾਧਨਾਂ ਦੇ ਮਾਧਿਅਮ ਨਾਲ ਉਜਾਗਰ ਹੋਣ ਲੱਗ ਪਏ ਹਨ। ਇਨ੍ਹਾਂ ਸੰਚਾਰ ਸਾਧਨਾਂ ਤੇ ਲੋਕਧਾਰਾ ਦੀ ਨਿਰੰਤਰ ਸਿਰਜਣਾ ਦੇ ਨਾਲ- ਨਾਲ ਰੂਪਾਂਤਰਿਤ ਰੂਪ ਵਿੱਚ ਵੀ ਲੋਕਧਾਰਾ ਸਿਰਜੀ ਜਾ ਰਹੀ ਹੈ। ਮਾਨਵੀ ਇਤਿਹਾਸ ਵਿੱਚ ਇੱਕ ਲੰਮਾ ਅਰਸਾ ਲੋਕਧਾਰਾ ਦਾ ਸੰਚਾਰ ਮੋਖਿਕ ਰੂਪ ਵਿੱਚ ਇੱਕ ਪੀੜ੍ਹੀ ਤੋਂ ਅਗਲੇਰੀ ਪੀੜ੍ਹੀ ਤੱਕ ਹੁੰਦਾ ਰਿਹਾ ਹੈ। ਪਰ ਸੰਚਾਰ ਸਾਧਨਾਂ ਦੀ ਕਾਢ ਨੇ ਲੋਕਧਾਰਾ ਦੇ ਸੰਚਾਰ ਨੂੰ ਕੇਵਲ ਮੋਖਿਕਤਾ

ਲੋਕ ਗੀਤ
ਲਿਖਤ
ਹੈ।
ਗੀਤੀ
ਅਨੁਸ਼
ਹਨ ਸ
ਲੋਕ-
ਗੀਤਾਂ
ਹੁੰਦਾ
ਬਿਗਾ
ਹਨ।
ਇਨ੍ਹਾਂ
ਮੋਖਿਕ
ਫਾਪੇ
ਦੀ ਅ
ਦੀ ਪੇ
ਗੀਤ
ਗੀਤ
ਕੁਝ
ਜਾਂਦੇ

	<p>संख्या/No. मि.स.19-26/2023- ज्ञान गरिमा सिंधु</p> <p>भारत सरकार वैज्ञानिक तथा तकनीकी शब्दावली आयोग शिक्षा मंत्रालय (उच्चतर शिक्षा विभाग)</p> <p>GOVERNMENT OF INDIA COMMISSION FOR SCIENTIFIC & TECHNICAL TECHNOLOGY Ministry of Education Department of Higher Education</p>	<p>फोन/Ph. : 011-26105211 011-20867170 011-20867172</p> <p>वेबसाइट/Website : www.cstt.education.gov.in www.csttpublication.mhrd.gov.in</p> <p>पश्चिमी ब्लॉक VII, रामकृष्ण पुरम, सेक्टर-1 West Block VII, R. K. Puram, Sector-1 नई दिल्ली/New Delhi-110066</p>
सेवा में,		Date: 29.05.2023
प्राचार्य कन्या महाविद्यालय जालंधर		
महोदय/महोदया,		
<p>आयोग द्वारा ज्ञान गरिमा सिंधु अंक स. 77 (जनवरी-मार्च 2023) के संदर्भ में विभिन्न स्रोत के माध्यम से लेख एवं शोध पत्र प्राप्त हुए हैं। प्राप्त सभी लेखों एवं पत्रों का संपादक मंडल द्वारा समीक्षा किया गया है। इसी संदर्भ में आयोग द्वारा दिनांक 29-30 नवंबर, 2022 को कन्या महाविद्यालय, जालंधर में एनईपी-2020 के कार्यान्वयन और वैज्ञानिक और तकनीकी शब्दावली की भूमिका" विषय पर दो दिवसीय राष्ट्रीय सम्मेलन के आयोजन में पढ़े गए पत्र एवं कार्यक्रम के संदर्भ में प्रस्तुत पत्रों एवं लेखों को भी समीक्षा के लिए रखा गया है। संपादक मंडल द्वारा चयनित लेखों पत्रों को के शीर्षक का विवरण निम्नलिखित अनुसार है। यह पत्र / लेख ज्ञान गरिमा सिंधु अंक स. 77 (जनवरी-मार्च 2023) में प्रकाशित किया जा रहे हैं। पत्रिका संबंधित संपादन का कार्य प्रक्रियाधीन है।</p>		
प्रकाशनाधीन लेख / पत्र		
1.	राष्ट्रीय शिक्षा नीति 2020 विज्ञान शिक्षा की दृष्टि और परिप्रेक्ष्य	डॉ अर्चना सैनी
2.	राष्ट्रीय शिक्षा नीति कार्यान्वयन में पारिभाषिक शब्दावली की भूमिका	डॉ नीरज शर्मा
3.	नई शिक्षा नीति 2020 की कुछ चुनौतियां वर्तमान समय में	डॉ. कमलेश
4.	श्रीमद भगवत गीता में निहित शांति शिक्षा एक उदाहरण	डॉ. कमलेश
5.	मशीन लर्निंग एल्गोरिदम का उपयोग करके साइबर बुलिंग का पता लगाना:समीक्षा	डॉ. बलराम सिंह यादव
6.	राष्ट्रीय शिक्षा नीति 2020 के क्रियान्वयन में वैज्ञानिक और तकनीकी शब्दावली की भूमिका	सुश्री मंजीत कौर
7.	आर्टिफिशियल इंटेलिजेंस और मशीन के साथ वैज्ञानिक संगणना : एक समीक्षा	डॉ. सनी टुकराल
8.	राष्ट्रीय शिक्षा नीति 2020 उच्च शिक्षा के माध्यम से उद्यमियों का विकास	सुश्री रितु
9.	उच्च शिक्षा में प्रतिमान परिवर्तन नई शिक्षा नीति की धारणा (एन ई पी 2020)	सुश्री सबीना बत्रा
10.	मध्यवर्ती हिमालय का गढ़वाल क्षेत्र और उसकी बोलियाँ	डॉ. प्रसाद रतूड़ी
11.	भारतीय स्वतंत्रता संघर्ष, भारत की राष्ट्रभाषा और नेताजी सुभाष चंद्र बोस	श्री संजय चौधरी
12.	लोक महाकाव्य लोरिकायन वर्णित मारकुंडी का वीर लोरिक पत्थर एक भू वैज्ञानिक विवेचन	द्युति मालिनी एवं डॉ वैभव श्रीवास्तव
13.	राजभाषा: राजगार सृजनात्मकता के विविध आयाम	डॉ. संतोष कुमार बघेल
14.	वैज्ञानिक साहित्य का अनुवाद और नई शिक्षा नीति	डॉ. सूर्य कुमारी पी
		 (चक्रप्रम बिनोदिनी देवी) सहायक निदेशक (विषय) प्रभारी अधिकारी, ज्ञान गरिमा सिंधु

राष्ट्रीय शिक्षा नीति 2020: विज्ञान शिक्षा की दृष्टि और परिप्रेक्ष्य

डॉ अर्चना सैनी *

*सहायक प्राध्यापक, प्राणि विज्ञान विभाग, कन्या महा विद्यालय, जालंधर (पंजाब), इंडिया

ईमेल: archanasaini@gmail.com

सार

समग्र विज्ञान शिक्षा पर जोर किसी भी राष्ट्र के विकास के लिए बहुत महत्वपूर्ण है। राष्ट्रीय शिक्षा नीति (एनईपी) - 2020 रटकर सीखने की पद्धति पर आधारित पूर्व शिक्षा प्रणाली के विपरीत वैचारिक, व्यावसायिक और अनुभवात्मक विज्ञान शिक्षा पर अधिक ध्यान केंद्रित करती है। यह विभिन्न स्तरों पर और अधिक विज्ञान प्रयोगशालाओं और विज्ञान केंद्रों की स्थापना पर जोर देता है। यह हितधारकों को छात्रों में वैज्ञानिक स्वभाव विकसित करने के लिए प्रौद्योगिकियों को शामिल करने के अधिक तरीकों के बारे में सोचने में सक्षम बनाता है, एनईपी 2020 ने इसे अधिक अनुभवात्मक, कौशल उन्मुख बनाने और छात्रों को भविष्य के लिए तैयार औद्योगिक से लैस करने के लिए राज्य और राष्ट्रीय स्तर पर विज्ञान पाठ्यक्रम को संशोधित करने के लिए विशिष्ट सिफारिशों की हैं। जरूरत है, भारतीय पारंपरिक मूल्य प्रणालियों को आत्मसात करने वाले विज्ञान पाठ्यक्रम को विकसित करने और इसे और अधिक व्यावहारिक बनाने के लिए भारतीय भाषाओं में प्रदान किए जाने वाले ज्ञान पर जोर दिया जाता है। शिक्षा की इस नई प्रणाली में विभिन्न विषयों के संयोजन की भी अनुमति है। इस पत्र में विज्ञान शिक्षा के संबंध में एनईपी 2020 के कुछ दृष्टिकोणों और उनके कार्यान्वयन में आने वाली बाधाओं पर चर्चा की गई है।

कीवर्ड: एनईपी 2020, विज्ञान, शिक्षा, बहु-विषयक, बहुभाषी, कौशल आधारित ।

परिचय

विज्ञान शिक्षा दुनिया भर में हर सभ्य समाज का एक महत्वपूर्ण स्तंभ है। यह किसी भी समाज के विकास और प्रगति में महत्वपूर्ण भूमिका निभाता है। प्राचीन भारत में भी गुरुकुलों में देखी जाने वाली औपचारिक विज्ञान शिक्षा को प्रमुख महत्व दिया गया था और यह बहुत समग्र थी। यह व्यक्तिवादी दृष्टिकोण पर आधारित था और छात्र केंद्रित था। यह अत्यधिक व्यावसायिक था और इसने खगोल विज्ञान, शरीर विज्ञान और चिकित्सा विज्ञान, गणित और कृषि में व्यापक प्रगति की। लेकिन आधुनिक भारत में, स्वतंत्रता-पूर्व युग में विज्ञान शिक्षा को सबसे कम महत्व दिया गया था क्योंकि साक्षरता में सुधार ही शिक्षा का मुख्य उद्देश्य था। 1953 में माध्यमिक शिक्षा आयोग की सिफारिशों के बाद स्वतंत्रता प्राप्त करने के बाद विज्ञान को माध्यमिक स्तर पर स्कूलों में एक अनुशासन के रूप में पेश किया



Dr Archana Saini 4:00 pm

to prabhasyall ✓



----- Forwarded message -----

From: **E-IJEP Admin** <kalpanacorp81@gmail.com>

Date: Sat, May 13, 2023, 11:26 AM

Subject: Acceptance of paper

To: <archanasaini@gmail.com>

Subject: Acceptance of paper Id 20230320

Dear Sir/Madam,

Your paper has been accepted for publication in our journal.

Further, this is to inform you that we charge INR 6000 for a soft copy of your would-be published paper therefore, you are requested to make payment within two months through DD or Net banking in favour of Kalpana Corporation, payable at Varanasi, under intimation to us. While making payment, kindly mention your paper Id/ reference number or your name. We will send you a soft copy of your paper via email after the publication of the paper. Our Bank detail is as follows-

NAME OF BANK	: INDIAN BANK
ACCOUNT NAME	: KALPANA
CORPORATION	
ACCOUNT NO.	: 6029576295
CBS CODE OF THE BRANCH	: 00957
MICR CODE OF THE BRANCH	: 221019003
IFSC CODE OF THE BRANCH	: IDIB000G035
SWIFT CODE	: IDIBINBBGOD

You are requested to kindly fulfil all the above-desired requirements within one month. Kindly mail us the screenshot of the payment. If not performed, then after a lapse of one month your paper will be cancelled automatically. Thereafter, it will not be considered for publication.

Assessment of plastic pollution in Rivers of Punjab

¹Prabha, ²Lipsa Dehal, ³Sonalpreet Kaur, ⁴Archana Saini

¹Assistant Professor, PG Department of Zoology, Kanya Maha Vidyalaya, Jalandhar-144001, Punjab, India.

⁴Assistant Professor, PG Department of Zoology, Kanya Maha Vidyalaya, Jalandhar-144001, Punjab, India.

*Corresponding Author (e-mail: prabhasyall@gmail.com)

ABSTRACT

Plastic pollution is considered an important environmental problem, as an emerging issue that might affect biological diversity, human health by affecting food chain negative impact on ecology, endanger aquatic species and also cause economic damage. Earlier there were researches done on oceans, now a day focus is on the freshwater ecosystem. Aim of this study was to estimate size, type and distribution of plastic in river Sutlej and river Beas. Satluj River is largest river of Punjab that flow through the historic cross land regions of Punjab in northern India and Pakistan. Macroplastic mainly recorded in the study are bags (high- and low density polythene), food wrappers (mainly of propylene and polystyrene), bottles (polyethylene tetraphthalate), and disposable food containers (expanded polystyrene). Plastics are found on shoreline sediments of rivers. Microplastic and mesoplastics are of diverse resins. Data was compared with other marine and freshwater studies indicated similar relevance of plastic pollution and shows that plastic pollution is a serious problem in Sutlej and Beas River. The pollution changes water quality index that include parameters like pH, conductivity, chlorides, nitrates, ammonia and fecal coliforms. Microplastic transfers through filter feeding in food chain and these small particles translocate across the intestinal barrier, reaching the blood and rest of the body. Through fishes microplastics enter the human body and lead to many metabolic disorders. This study is also valuable from a social or education point of view.

Poll Res. 41 (3) : 1029-1035 (2022)

Copyright © EM International

ISSN 0257-8050

DOI No.: <http://doi.org/10.53550/PR.2022.v41i03.039>

COVID-19 AND ENVIRONMENT: A REVIEW

¹ABHAY PUNIA, ²SHWETA MAHESHWARI, ²PRABHA AND ²NALINI SINGH CHAUHAN*

¹Department of Zoology Guru Nanak Dev University, Amritsar 143 005, (Punjab) India

²Assistant Professor, P.G Department of Zoology, Kanya Maha Vidyalaya,
Jalandhar 144 004, Punjab, India

(Received 30 August, 2021; Accepted 2 February, 2022)

ABSTRACT

The COVID-19 pandemic has significant affect on every aspect of human lives. The spread of virus has been controlled by taking certain measures that have slowed down the economic activities along with significant effect on the environment. This review intends to explore the various negative and positive impacts of COVID-19 pandemic on our environment. Various lockdown measures that were used to contain the spread of virus has improved the air quality, reduced noise and water pollution, restoration of ecological systems through reduction of tourist's activities. But there are some negative impacts such as increase in medical waste and municipal waste.

KEY WORDS: COVID-19, Environment, Pollution, Medical waste, Municipal waste.

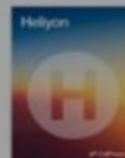
INTRODUCTION

Covid-19 pandemic occurred in late 2019 and then spread rapidly all over the world. Symptoms related to this disease are ranged from mild to severe. Most of the corona virus death cases occur in older people as they are reported as susceptible population. Several treatment options including anti-malarial drugs, antiviral agents, glucocorticoids, immunomodulators and convalescent plasma have been explored but each treatment has varying results. The person to person transmission is most likely route for the spread of COVID-19 infection (Carlos *et al.*, 2020; Chan *et al.*, 2020; Li Q. *et al.*, 2020). Some reports also suggested the spread of infection through contaminated surfaces (Ghinai *et al.*, 2020; Yu *et al.*, 2020).

Poor immune response has been directly linked with mortality in COVID-19 patients. People suffering from cancer, lung diseases, diabetes, chronic cardiovascular disease or even high blood pressure are at higher risk of covid-19 infection related mortality (Fang *et al.*, 2020; Giannis *et al.*, 2020; Qiu *et al.*, 2020; Shekerdemian *et al.*, 2020; Xiao *et al.*, 2020; Zhou *et al.*, 2020). Yang *et al.* (2020) have reported that the probability of acquiring severe Covid-19 infection for people suffering with

previous respiratory disease, hypertension and cardiovascular disease falls between 2.4 and 3.5. Similarly smoking and obesity has been related with severe infections (Wang *et al.*, 2020a, b). Ferguson *et al.* (2020) has reported that people who are less than 60 years old have median fatality rate of <0.2% as compared to 9.3% of those adults who are more than 80 years of age. Co morbidities have been directly linked to the five times increase in mortality (Jordan *et al.*, 2020). A death rate of 5.0% is reported in Wuhan, china which is close to that of world (4.2%) but higher mortality rate is reported in Iran (7.8%), Italy (7.8%) and Spain (6.0%) (Jin *et al.*, 2020; Li *et al.*, 2020a, b). A number of vaccines are available today for curing corona virus but still, there is need of extensive isolation measures along with use of disinfection products for breaking the chain of corona virus transmission.

Earlier, the restrictions on the movement of people were implemented in different countries as the control measure for reducing mortality rate and for containing the spread of virus. Countries like India had imposed the lock down for restricting the movement of approximately 1.3 billion people which was started from March 24, 2020 (Somani *et al.*, 2020). In others countries like Italy and Britain travel restrictions along with closing of pubs, bars



Research article

Impact of caffeic acid on growth, development and biochemical physiology of insect pest, *Spodoptera litura* (Fabricius)Abhay Punia^a, Vijay Singh^b, Anita Thakur^c, Nalini Singh Chauhan^{d,*}^a Department of Zoology, DAV University, Jalandhar, Punjab, India^b Department of Botany, Mata Gajri College, Ferozgarh Sahib, Punjab, India^c Department of Chemistry, RIMT University, Mandi Gobindgarh, Punjab, India^d P.G. Department of Zoology, Kanya Maha Vidyalaya, Jalandhar, Punjab, India

ARTICLE INFO

Keywords:

Caffeic acid
Phenols
Bioassays
Nutrition
Antioxidant enzymes
Stress markers
Hemocytes
S. litura

ABSTRACT

The tobacco cutworm, *Spodoptera litura* (Fabricius) is a serious cosmopolitan pest that attacks several economically important crops such as maize, sorghum, chickpea, pigeon pea, cotton, tobacco and sunflower. It has developed resistance to most pesticides resulting in its continual outbreak. The effect of caffeic acid on second instar larvae of *S. litura* was evaluated by carrying out bioassays, nutritional assays, immune assays and biochemical assays with phenolic acids. Bioassays carried out with second instar larvae of *S. litura* showed growth inhibiting effects of various concentrations (5 ppm, 25 ppm, 125 ppm, 625 ppm and 3125 ppm) of caffeic acid on *S. litura* in comparison to control. A significant increase in mortality as well as an increased development time was observed with increase in the concentration of caffeic acid. A decrease in nutritional indices, including relative growth rate (RGR), relative consumption rate (RCR), efficiency of conversion of ingested food (ECI), efficiency of conversion of digested food (ECD), and approximate digestibility (AD), indicated that dietary caffeic acid also negatively impacted the nutritional physiology of *S. litura* larvae. Caffeic acid has a significant impact on the immunological response of *S. litura* larvae. As the concentration of caffeic acid increased, the overall number of hemocytes decreased. Enzymatic assays revealed a significant increase in antioxidant enzymes when *S. litura* larvae were given an artificial diet containing LC₅₀ concentration of phenolic acid for an interval of 24, 48, 72 and 96 h. The levels of oxidative stress markers (hydrogen peroxide, protein carbonyl and lipid peroxide) were also significantly enhanced in *S. litura* larvae after treatment with phenolic acid. According to our study, caffeic acid can be employed as a substitute for traditional insecticides to reduce the population of *S. litura*.

1. Introduction

The tobacco cutworm, *Spodoptera litura* (Fabricius) (Lepidoptera: Noctuidae) is one of the many important polyphagous [1,2] insect pests plaguing a large number of economically important crops [3], having a host range of 180 plant species [4], and a huge potential to invade new areas due to its ability to adapt to new climatic and ecological conditions. In recent years, a frequent outbreak of *S. litura* has been observed in soybean fields [5] in the years 1997, 2005, 2008 and 2009. In 2008 approximately 1.4 m ha of soybean was damaged by *S. litura* in the Vidarbha region of Maharashtra and causing extensive defoliation in the plant [6]. It is broadly distributed

* Corresponding author.

E-mail address: nalini.loyd@gmail.com (N.S. Chauhan).<https://doi.org/10.1016/j.heliyon.2023.e14593>

Received 15 April 2022; Received in revised form 10 March 2023; Accepted 10 March 2023

Available online 14 March 2023

2405-8440/© 2023 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).



Research article

Effect of daidzein on growth, development and biochemical physiology of insect pest, *Spodoptera litura* (Fabricius)

Abhay Punia^a, Nalini Singh Chauhan^b  

Show more 

+ Add to Mendeley  Share  Cite

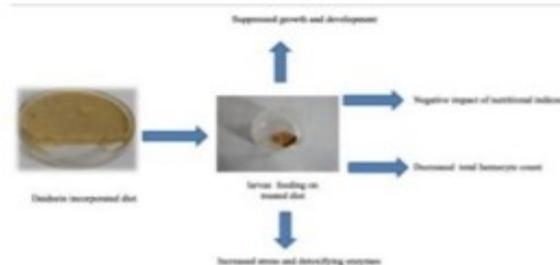
<https://doi.org/10.1016/j.cbpc.2022.109465>

[Get rights and content >](#)

Abstract

Anti-insecticidal potential of daidzein was studied by feeding second instar larvae of *Spodoptera litura* (Fabricius) on artificial diet incorporated with different concentrations (5 ppm, 25 ppm, 125 ppm, 625 ppm) of diadzein. Results revealed high larval mortality, prolongation of pupal and total developmental period of the larvae treated with diadzein. Anti-nutritional/post ingestive toxicity of diadzein was also revealed by the decrease in the nutritional indices such as relative growth rate (RGR), relative consumption rate (RCR), efficiency of conversion of digested food (ECD), efficiency of conversion of ingested food (ECI) and approximate digestibility (AD). The suppression of immune function due to decline in the total hemocytes count was also observed in treated *S. litura* larvae. Profiles of detoxifying enzymes viz. superoxide dismutases (SOD), catalase (CAT), ascorbate peroxidases (APOX) and glutathione S-transferase (GST) were also significantly increased with diadzein treatment. The hydrogen peroxide content (H₂O₂), lipid peroxide content (LP) and protein carbonyl content were also significantly enhanced in the treated larvae thus, indicating oxidative stress in the insect. Our findings suggest that daidzein can be used as the alternative to conventional pesticides for controlling *S. litura* population.

Graphical abstract



Growth disruptive effects of ferulic acid against *Spodoptera litura* (Fabricius) and its parasitoid *Bracon hebetor* (Say)

A. Punia¹, N.S. Chauhan², R. Singh¹, S. Kaur¹ and S.K. Sohal^{1*}

¹Department of Zoology, Guru Nanak Dev University,
Amritsar-143005, Punjab, INDIA

²P.G Department of Zoology, Kanya Maha Vidyalaya,
Jalandhar-144001, Punjab, INDIA
E. Mail: satudhillon@hotmail.com

(Received in revised form: July 31, 2021)

ABSTRACT

We studied the effects of ferulic acid (5, 25, 125, 625, 3125 ppm concentrations) in artificial diet on *Spodoptera litura* (Fabricius) and its parasitoid *Bracon hebetor* (Say) on 6-days old larvae of *S. litura*. Higher concentrations of ferulic acid increased the mortality of *S. litura* larvae, decreased adult emergence and delayed the developmental period. The higher concentration (LC₅₀= 2573.33ppm) of ferulic acid also decreased the growth of *B. hebetor* (Say) larvae. However, the adverse effects were less at lower concentration (LC₅₀=25.92 ppm). The ferulic acid significantly reduced the nutritional indices (RGR, RCR, ECD and ECI) and immune response in *S. litura* larvae. Our findings suggested that lower concentrations of ferulic acid may help in controlling insect-pest population and conserve the parasitoid's fitness.

Keywords: *Bracon hebetor*, Ferulic acid, haemocyte, larval, nutritional indices, Phenols, *Spodoptera litura*, tritrophic.

INTRODUCTION

Insect-pests cause huge losses in crops despite too much use of chemical pesticides (38). Botanical insecticides as an alternative to organic pesticides are being considered for pest management due to their low impact on non-target organisms, minimal residual environmental effects, fast degradation in field conditions and low toxicity for humans (27,39). Thus, recently there is an increased interest in their development especially in the developing countries (India, China and Brazil) and other emerging economies (15). Plants synthesize allelochemicals that are feeding deterrent to insects and thereby regulate the insect population (24,53). Plant phenolics, hydroxybenzoic acids viz., gallic acid, hydroxycinnamic acids found in grape juice are used by plants for pigmentation, growth, reproduction, resistance to pathogens and insect herbivores etc. (23). Plant secondary metabolites such as ferulic acid, chlorogenic acid, quercetin and rutin are inhibitory to insect pest, *Spodoptera litura* (Fabricius) (22,50). The lepidopteran pest, *S. litura* is a polyphagous pest widely responsible for damage to many important crops (31,47). The economic losses caused by it range from 25.8-100 % depending on crop stage and its infestation level (12). The unjudicious use of chemical pesticides and insecticide resistance has resulted in its frequent outbreak (44,52).

Bracon hebetor (Say) (Hymenoptera: Braconidae) is a cosmopolitan, gregarious, ectoparasitoid that attacks the larval stage of various species of lepidopterans. The parasitoid has been used to control the population of cotton bollworm, *Helicoverpa armigera* (Hubner) and the Indian meal moth, *Plodia interpunctella* (Hubner) (7,21).

*Correspondence author,

