

As Per Sant Gadge Baba Amravati University
Syllabus (under CBCS)

A Textbook of
B.Sc. Second year course in

BOTANY

Cell Biology, Genetics and Plant Breeding
Semester - IV

- AUTHORS -

Dr. P. Y. Anasane

Professor
Department of Botany
G. S. Gawande Mahavidyalaya,
Umarkhed.

Dr. S. M. Deosthale

Associate Professor
Department of Botany
B. B. Arts, N. B. Commerce and
B. P. Science College, Digras, Dist. Yavatmal.

Dr. S. K. Lande

Assistant Professor
Department of Botany
Late Pundlikrao Gawali Arts and Science
Mahavidyalay, Shirpur (Jain), Dist. Washim.

Dr. N. P. Deshmukh

Assistant Professor
Department of Botany
Shri. Shivaji Arts, Commerce and
Science College, Akot.

- EDITORS -

Dr. P. Y. Anasane

Professor
Department of Botany
G. S. Gawande Mahavidyalaya,
Umarkhed.

Dr. P. R. Sardar

Assistant Professor
Department of Botany
Rajarshee Shahu Science College,
Chandur Railway.

Dr. K. M. Ranjalkar

Assistant Professor
Department of Botany
Late Pushpadevi Patil Arts and Science
College, Risod, Dist. Washim (MS).

Mr. K. U. Makode

Assistant Professor
Department of Botany
Smt. Radhabai Sarda Arts, Commerce & Science
College, Anjangaon Surji, Dist. Amravati.

Published by the **DnyanPath Publication (India)**

The first edition published in January 2024

ISBN 13 : 978-81-19435-30-2

As Per Sant Gadge Baba Amravati University
New Syllabus (under CBCS)



A Textbook of
B.Sc. Second year course in

B **TANY**

Cell Biology, Genetics and Plant Breeding

Semester - IV

Authors

Dr. P. Y. Anasane
Dr. S. M. Deosthale
Dr. S. K. Lande
Dr. N. P. Deshmukh

Editors

Dr. P. Y. Anasane
Dr. P. R. Sardar
Dr. K. M. Ranjalkar
Mr. K. U. Makode



DNYANPATH
PUBLICATION

INTRODUCTION TO BOTANY- TAXONOMY ANGIOSPERMS

3 / 225



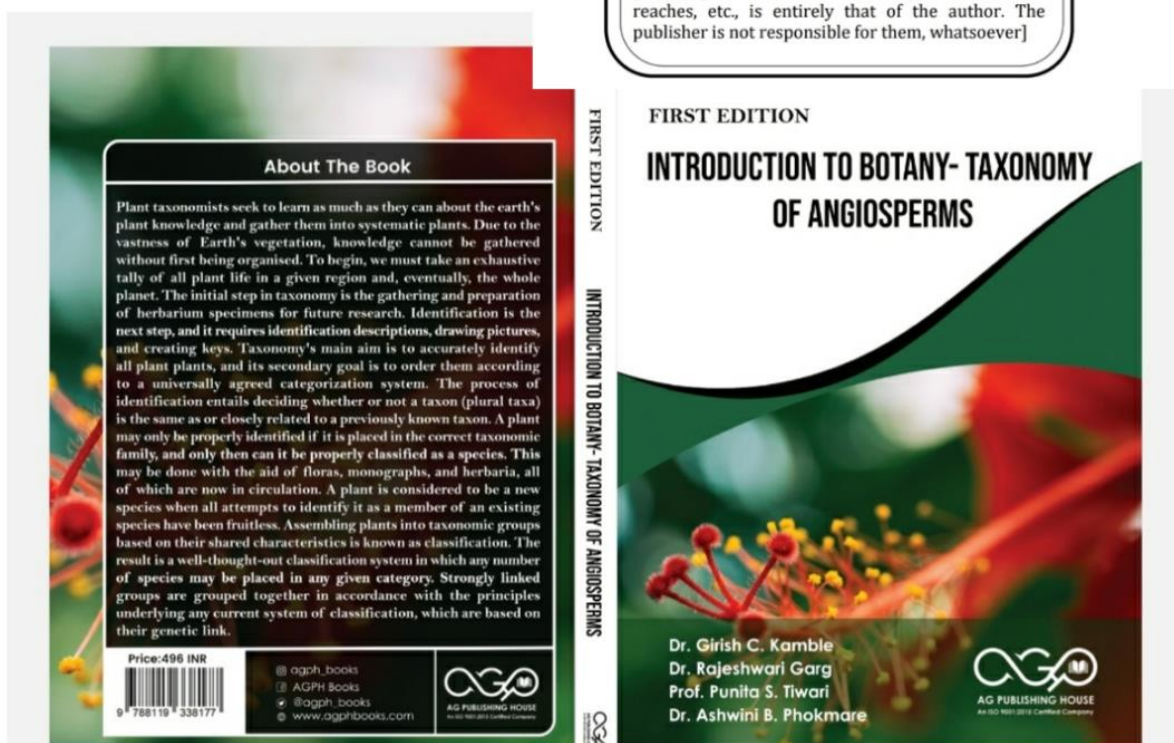
Published By: AGPHBooks
(AG Publishing House)
Bhopal, M.P. India
Email : editor@agphbooks.com,
books@academicguru24x7.com
Website : www.agphbooks.com
Contact : +91-7089366889

Copyright © 2023 @ Authors
Author Proof : Dr. Girish C. Kamble, Dr. Rajeshwari Garg,
Prof. Punita S. Tiwari and Dr. Ashwini B. Phokmare.
Layout & Cover: AGBooks

ISBN: 978-81-19338-17-7

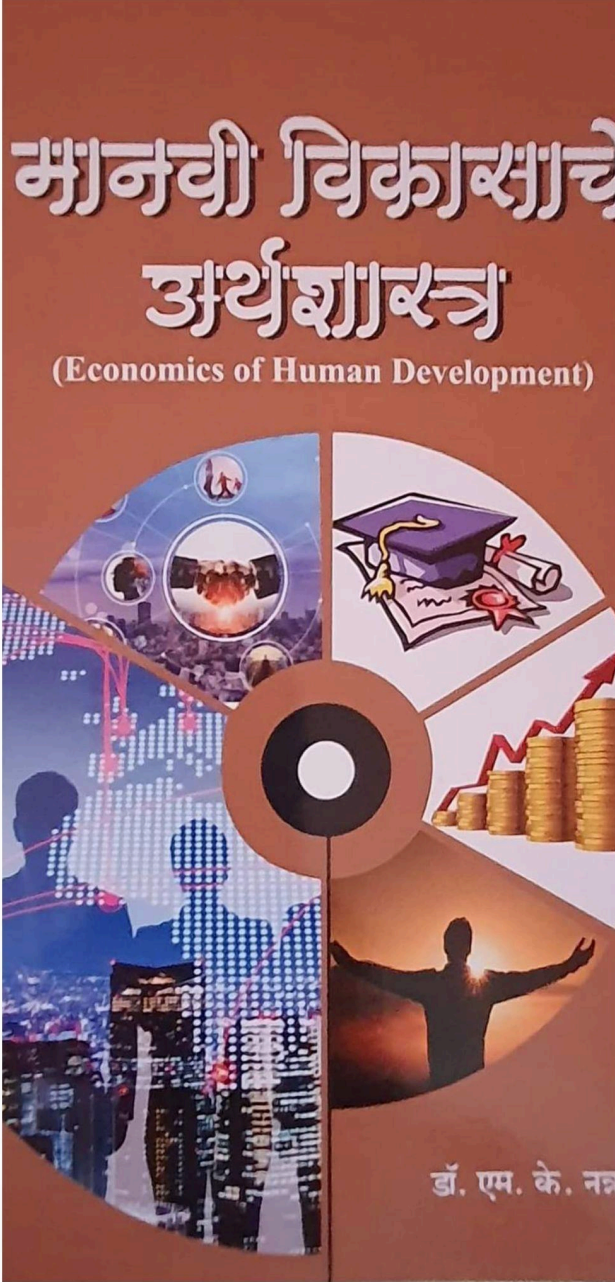
All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, without permission of the author. Any person who does any unauthorized act in relation to this Publication may be liable to criminal prosecution and civil claims for damage.

[The responsibility for the facts stated, conclusion reaches, etc., is entirely that of the author. The publisher is not responsible for them, whatsoever]




Shri Shivaji Arts, Commerce and Science College, Akot
Report
Book Published
Organized by
Department of Economics
No. of Books published by faculty members of the department.
1) Economics of Human Development 2) Theory of Micro Economics 3) Applied Statistics
Academic Session : 2023-24

Head of Department	Principal



मानवी विकासाचे अर्थशास्त्र
(Economics of Human Development)

डॉ. एम. के. न



डॉ. एम. के. न
एम. ए., सेंट. एम. फिल. पीएच. डी. (अर्थशास्त्र)

- सहयोगी प्राध्यापक व अर्थशास्त्र विभाग प्रमुख, पदवी व पदव्युत्तर अर्थशास्त्र विभाग, श्री शिवाजी कला, वाणिज्य व विज्ञान महाविद्यालय, आकोट जि. अकोला.
- वी. ए. पदवी वर्ग- १४ वर्ष व एम. ए. पदव्युत्तर - ०८ वर्ष अध्यापन कार्याचा अनुभव.
- संत गाडगे बाबा अमरावती विद्यापीठ, अंतर्गत अर्थशास्त्र पीएच. डी. संशोधन मार्गदर्शक व सदस्य, अर्थशास्त्र विषय परीक्षा समिती (पदव्युत्तर पदवी).
- आजीवन सदस्य : इंडियन इकॉनॉमिक असोसिएशन, मराठी अर्थशास्त्र परिषद, विदर्भ विद्यापीठ अर्थशास्त्र शिक्षक परिषद.
- विविध राज्यस्तरीय परिषदांमध्ये सहभाग व शोधनिबंध प्रकाशित.
- यू. जी. सी. मान्यताप्राप्त एक मायनर रिसर्च प्रोजेक्ट पूर्ण.


प्रकाशित ग्रंथसंपदा

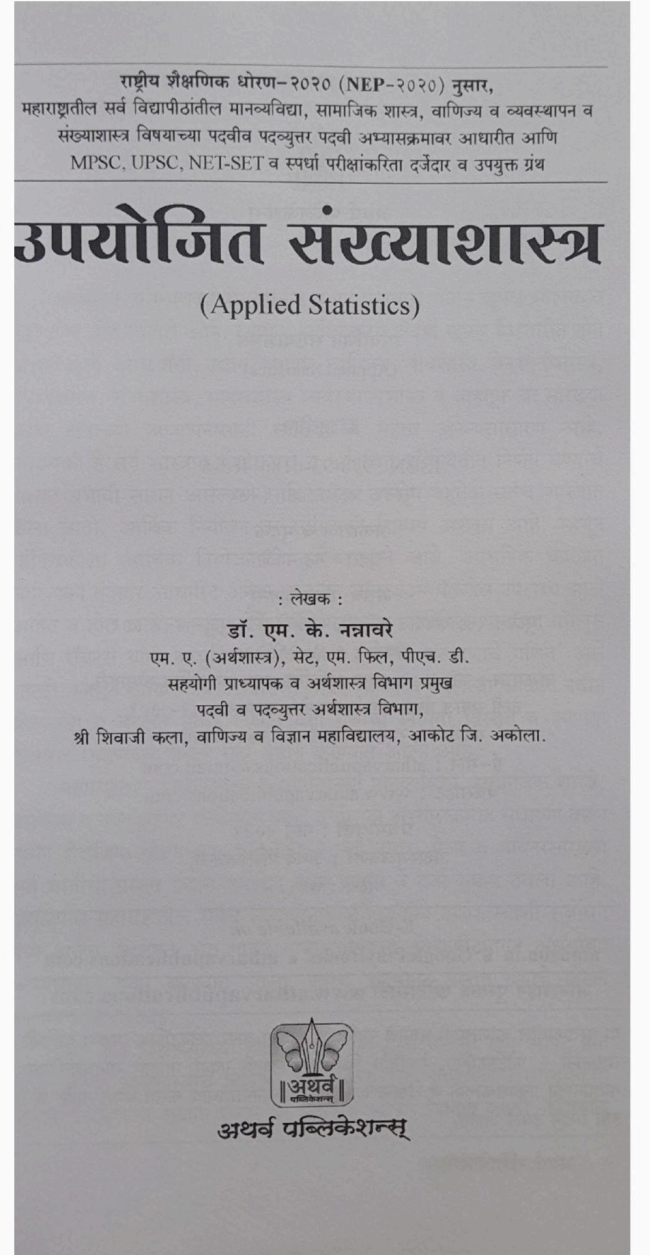
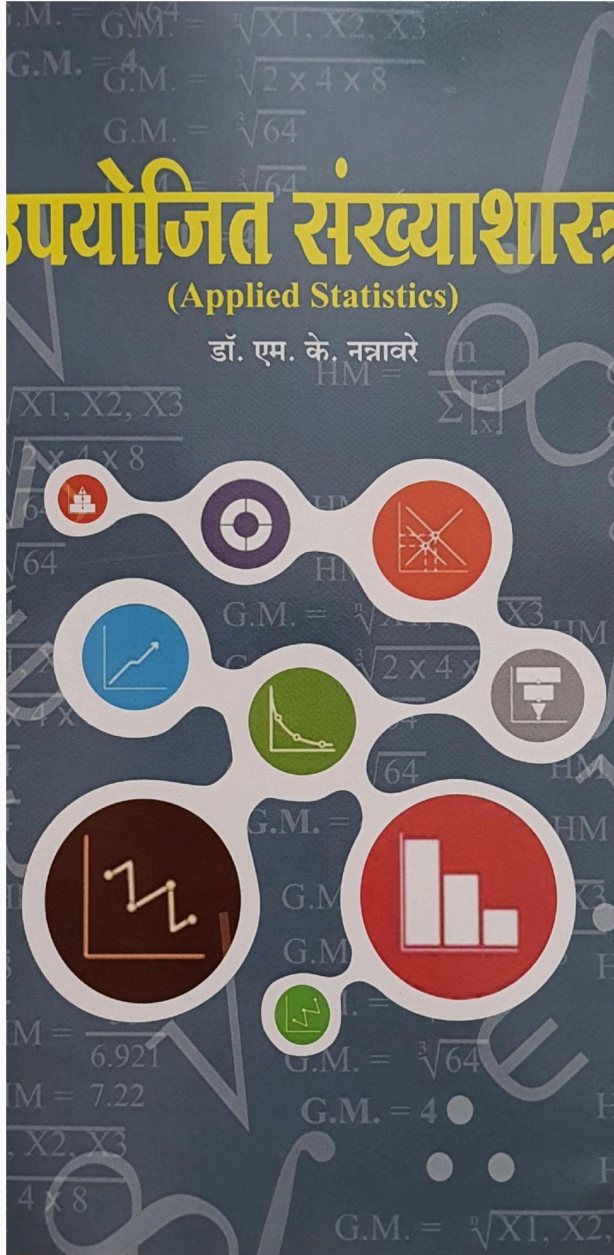
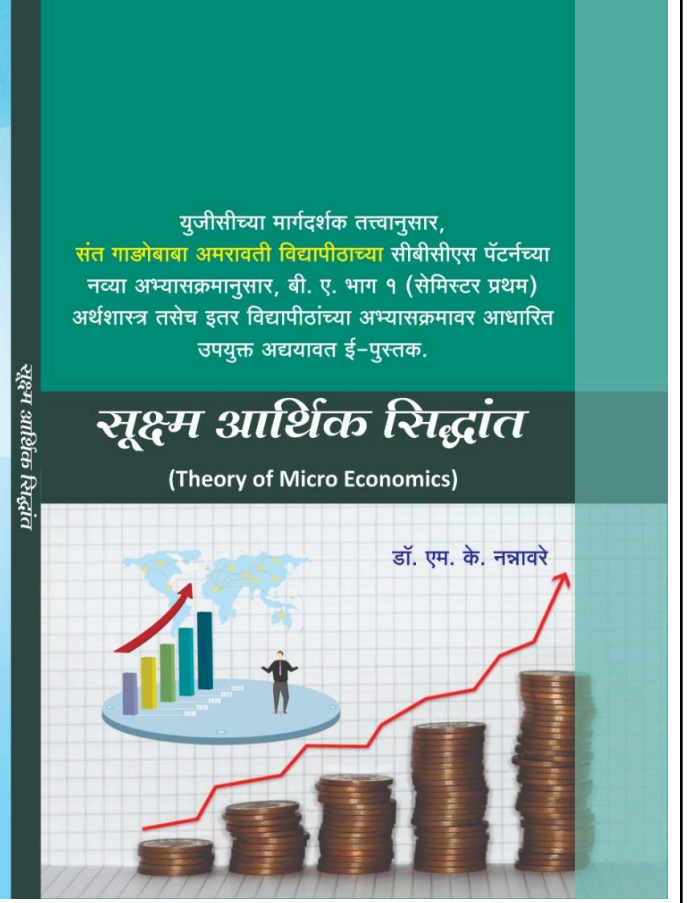
- लोकसंख्याशास्त्र (जानेवारी, २०२१)
- मानवी विकास (फेब्रुवारी, २०२२)
- लोकसंख्याशास्त्र : सिद्धान्त व विकास (जानेवारी, २०२३)
- महाराष्ट्राची अर्थव्यवस्था (एप्रिल, २०२३)

आता ई-बुक स्वरूपातही
अथर्वची सर्व पुस्तके उपलब्ध...

pejbook.com
amazon.com
Google Play Books
atharvpublications.com

अथर्व पब्लिकेशन्स
ऑनलाईन पुस्तक खरेदीकरिता...
www.atharvpublications.com





Learning
Beyond the
CLASSROOM :
Higher Education
for a Changing World



Edited by : Dr. Rita T. Deshmukh

Published by : DnyanPath Publication

Learning
Beyond the
CLASSROOM :
Higher Education
for a Changing World



Edited by : Dr. Rita Deshmukh



DNYANPATH
PUBLICATION

Copyright © DnyanPath Publication (INDIA) 2024

No part of this publication may be reproduced or distributed in any form or by any means, electronic, mechanical, photocopy, recording, or otherwise or stored in a database or retrieval system without the prior written permission of publishers. This edition can be exported from India only by the Publishers.

The editorial board does not necessarily agree with all the research articles included in this edited book.

**Learning
Beyond the
CLASSROOM :
Higher Education
for a Changing World**

Editor : Dr. Rita T. Deshmukh

Published by **DnyanPath Publication, Amravati (INDIA)**

The edition published in January, 2024

ISBN : 978-81-19435-33-3



www.dnyanpath.com

Reg. Office : FFS-A, Block C, First Floor, Venus Plaza, Shegaon Naka, V.M.V. Road,
Amravati, Maharashtra 444 603

Branch Office : Kalash Complex, Near Gulmohar Hall, Pande Layout, New Sneha Nagar,
Khamala, Nagpur, Maharashtra 440025

Visit us : www.dnyanpath.com

Contact us : dnyanpathpub@gmail.com

Phone : 08600353712, 09503237806

Printed at - Shri Gurudeo Printers, Amravati.

Mahatma Fule Sankul, Shegaon Naka,
V.M.V. Road, Amravati - 444603 (Maharashtra)

₹ : 200/-

- I N D E X -

- 1. A Comparative and Collective Study on
Online and Classroom Teaching-Learning in Higher Education** **1-3**
Dr. Anil M. Tirkar
- 2. Analysing the Transformative Effects of
Digital Learning on Higher Education** **4-7**
Dr. Mukesh Pundalik Patil, Dr. Kiran Nathu Khethe
- 3. Cricket, Crime and Corruption in
Aravind Adiga's Novel Selection Day** **8-10**
Dr. Rupesh S.Wankhade
- 4. English Language Learning beyond the classroom** **11-13**
Prof. Dr. Sachin H. Telkhade
- 5. Importance of Information Technology in
Commerce & Management** **14-17**
Dr. Jadhav Viju Dattatraya
- 6. Learning in the Digital Age:
Revolutionizing Education with Modern Technology** **18-21**
Gajanan Dayaramji Tayade
- 7. Impact of Online Education
as Compare to Classroom Teaching** **22-24**
Mangalavati G. Pandey
- 8. Inclusive Education regarding NEP-2020:
Challenges and Remedies** **25-27**
Dr. Madhuri Madhukarrao Deshmukh
- 9. The gender equality and legal profession on
empirical study on pay disparities.** **28-30**
Vandana Bhivsan Sirsath
- 10. "The Role of Technology in Higher Education :
Preparing Teachers for 21st Century Roles"** **31-34**
Dr. Bhagayashree A. Deshpande

Learning in the Digital Age: Revolutionizing Education with Modern Technology

Gajanan Dayaramji Tayade

Department of English

Shri Shivaji Arts, Commerce & Science College Akot, Dist. Akola, Maharashtra.

Sant Gadge Baba Amravati University Amravati.

tejtayade@gmail.com | Mo. 9922116790

Abstract:

Technology has certainly changed the way we live. It has impacted different facets of life and redefined living. Undoubtedly, technology plays an important role in every sphere of life. Several manual tasks can be automated, thanks to technology. Also, many complex and critical processes can be carried out with ease and greater efficiency with the help of modern technology. Thanks to the application of technology, living has changed and it has changed for the better. In this age, we find ourselves standing on the cusp of an educational revolution, with technology serving as the catalyst. The importance of technology in schools cannot be ignored. In fact, with the onset of computers in education, it has become easier for teachers to impart knowledge and for students to acquire it. The use of technology has made the process of teaching and learning all the more enjoyable.

This article explores the profound impact of modern technology on education, heralding a transformative era where learning transcends traditional boundaries. Drawing upon the analogy of technology as a divine gift, the narrative unveils how it has revolutionized various aspects of life and subsequently reshaped the educational landscape. The central focus is on the role of technology in schools, emphasizing how it has eased the dissemination of knowledge, empowered personalized learning, and fostered global collaboration. The integration of virtual reality, artificial intelligence, and blockchain technology is examined, underscoring their pivotal contributions to the redefinition of education. Furthermore, the article delves into the automation of manual tasks, environmental sustainability, and the gamification of learning as key facets of this educational revolution. The narrative concludes by emphasizing that modern technology is not merely a tool but a catalyst that redefines the learning experience, making it dynamic, engaging, and globally accessible.

Keywords:

Technology, Education, Revolution, Digital Age, Personalized Learning, Virtual Reality, Artificial Intelligence.
Introduction:

The 21st century, often regarded as the "era of technology," has undeniably ushered in an unprecedented wave of innovation and transformation across all facets of our lives. From the moment we wake up to the time we go to bed, technology has become an indispensable companion, intricately woven into the fabric of our daily existence. In this digital age, it is more than just a tool; it is a defining force, steering the course of human progress and shaping the trajectory of nations. The role of technology in our contemporary world extends far beyond mere convenience; it stands as the bedrock of economic growth and global competitiveness. In today's landscape, an economy that lags in technological advancement risks being left in the shadows of progress and development. The pervasive influence of technology is profound, and its contribution to our lives cannot be overstated. It has granted us unprecedented convenience, making our tasks more manageable, our endeavors more efficient, and our lives less time-consuming. From the ease of communication through smartphones to the revolutionary strides in healthcare and transportation, technology has left an indelible mark on every aspect of our existence.

Yet, amid this grand tapestry of technological transformation, one arena shines as a vivid testament to its unparalleled impact: education. In an era where knowledge is the currency of success and adaptability is the key to survival, education stands at the forefront of societal progress. The manner in which we acquire knowledge, share information, and cultivate skills has been irrevocably altered by the inexorable march of technology. This article is an exploration of the profound metamorphosis technology has wrought upon the educational landscape. It examines how the symbiotic relationship between technology and education has engendered a revolution, offering new avenues for learning and revolutionizing the very essence of teaching. In the following pages, we will delve into the myriad ways in which technology has disrupted traditional educational paradigms, ushering in an age where learning is not confined by classroom walls or restricted by geography.

From virtual reality to artificial intelligence, blockchain technology to gamification, technology is redefining the

contours of modern education, making it more personalized, engaging, and accessible than ever before. The impact of technology in education extends beyond the classroom; it has permeated the administrative tasks, the assessment methodologies, and even the way educational credentials are verified. As we traverse the intricate web of this technological revolution in education, it becomes evident that this is not merely a surface-level transformation. It is a seismic shift that has the potential to empower learners, democratize access to knowledge, and break down the barriers that once hindered progress. The nexus between education and technology is a testament to the unending quest for knowledge and the limitless possibilities that the digital age has unlocked. In this dynamic interplay between the virtual and the real, we glimpse a future where education knows no bounds, and learning is a lifelong adventure in the digital age.

Objectives of Study :

1. To provide a comprehensive overview of the profound impact of modern technology on education in the 21st century.
2. To analyze the ways in which technology has transformed traditional educational methods and paradigms.
3. To explore the role of technology in personalized learning and how it caters to the individual needs and preferences of students.
4. To investigate the global collaboration facilitated by technology in the educational context, transcending geographical boundaries.

Research Methodology :

The research methodology employed for this study encompasses a multifaceted approach to comprehensively investigate the impact of technology on education in the 21st century. It begins with an extensive review of existing literature, delving into academic journals, books, research papers, and pertinent reports to establish a foundation of knowledge in the field. Employing both quantitative and qualitative analyses, the study aims to discern trends, patterns, and the overall impact of technology on education. By comparing and contrasting institutions with varying levels of technology integration, the research seeks to offer insights into the effectiveness and implications of technology in education. Furthermore, the assessment of specific technologies, environmental sustainability aspects, pedagogical approaches, and consideration of emerging trends and challenges will contribute to a comprehensive understanding of this evolving educational landscape. Ultimately, this research methodology is designed to provide practical recommendations for a wide range of stakeholders, facilitating the optimization of technology's role in education.

Literature Review :

The integration of technology into education has sparked a paradigm shift that has been extensively documented in the literature. This review consists of the multifaceted impact of technology on education, encapsulating several significant themes. Personalized learning emerges as a prominent concept, as studies reveal that technology, particularly artificial intelligence and adaptive learning platforms, enables educators to tailor instruction to individual students' needs. The result is a more dynamic and effective educational experience (Vygotsky, 1978; Anderson et al., 1985). Additionally, technology has fostered global collaboration in education, breaking down geographical barriers through online platforms and collaborative learning (Dede, 1996; Keegan, 1996). The advent of immersive technologies, such as virtual reality and augmented reality, has transformed learning environments by enhancing student engagement and knowledge retention (Dalgarno & Lee, 2010; Huang & Huang, 2019). This review underscores the profound impact of technology on education and sets the stage for a deeper exploration of its evolving role in shaping the future of learning and teaching.

Data Analysis :

According to recent insights, modern students prefer using technology as it enhances their learning experience. They find it more interactive and engaging, making knowledge transfer easier and more effective. This reliance on technology is unavoidable, even in educational institutions. The internet's significance in education has grown immensely over the last decade, offering students a plethora of resources and convenience. It has become an integral part of daily life, from television to smartphones, providing access to tutorials and academic materials for enhanced learning. Projectors and visual aids have made learning more interactive and appealing in top institutions, boosting motivation and efficiency. The digital footprint in education has fostered 24/7 connectivity and access to various learning resources. Online degrees, facilitated by technology and internet applications, have gained popularity, particularly among working students seeking flexible study options. Technology has seamlessly woven itself into the educational fabric, becoming an integral component of the curriculum, instructional delivery, and a valuable tool to enhance the learning process. Thanks to technology, education has evolved from being passive and reactive to becoming interactive and dynamic.

In both corporate and academic settings, education plays a pivotal role. In the corporate world, it serves as a means to empower employees to adopt new approaches and skills. Conversely, in academia, education ignites curiosity and nurtures the minds of students. Regardless of the setting, the integration of technology serves to improve students' comprehension and retention of crucial concepts.

Learning Beyond the Classroom : Higher Education for a Changing World

Positive Impact on Student Learning :

Technology's rapid evolution, though occasionally challenging for educators, offers numerous benefits for student learning. Its integration in schools has demonstrated advantages such as self-paced learning, which can be challenging in whole group settings, and individualized instruction that supports students' strengths and addresses their weaknesses (Bulman & Fairlie, 20-23). Technology also facilitates faster feedback and enhances collaborative efforts among larger groups. Interactive whiteboards simplify teaching, providing students with improved visual aids and making lessons more engaging for educators. Mobile devices enable rapid information dissemination (Simuforosa 4). Furthermore, integrating technology and peer-led discussions about literature can significantly boost student engagement and motivation. This approach offers an accessible and motivating way to expose students to different ideas and cultures. Online literature discussions create a sense of community and encourage positive social interaction. Overall, technology's positive impact on education is evident in its ability to enhance learning experiences and facilitate diverse forms of engagement. Computer-based literacy programs have transformed the assessment and evaluation of English Language Learners (ELLs) in elementary and secondary classrooms. These programs offer a wide range of accommodations, surpassing traditional "pencil and paper assessments." An exemplary approach is the integration of computer programming with aids like bilingual dictionaries, pop-up glossaries, and read-aloud options. This combination effectively levels the playing field for ELLs, providing accessible and user-friendly support to keep them on par with their peers.

Negative Health Impact :

The integration of technology in education ushers in a multitude of advantages, but it's imperative to acknowledge and address the accompanying drawbacks and potential health risks. Social learning theory emphasizes the role of adolescents learning through imitation, which can have significant implications when it comes to what they observe on screens. Concurrently, the super-peer theory underscores how media can inadvertently normalize risky behaviors, potentially interfering with the educational process. Furthermore, excessive screen time can lead to a decline in academic performance, as it diverts students' attention away from their studies and impairs their concentration (Simuforosa 5). In addition to the distractions and imitative behaviors induced by technology, the negative impacts extend to students' health and well-being. The use of computer games, television, and technological devices can disrupt the quality of sleep in adolescents, subsequently affecting their academic performance. Poor sleep quality, often linked to technology

addiction, can lead to difficulties in comprehending educational material. Effective learning requires a focused mind and body, and any distractions, whether they be tiredness, hunger, or emotional stress, can hinder a student's capacity to fully engage with and grasp the content being taught (Strom, 13). In the quest for a harmonious relationship between technology and education, it is crucial to strike a balance between the benefits and potential drawbacks. It is here that the importance of comprehensive well-being comes into play. Finding the equilibrium between technology use and students' overall health is essential for effective and productive learning. It is only by addressing these challenges that we can maximize the transformative potential of technology while nurturing holistic well-being in the educational journey. Additionally, it is worth considering the impact on creativity, where the sheer abundance of information on the internet can inadvertently stifle original thought as students often resort to copying and pasting content to achieve better grades. This highlights the importance of fostering critical thinking and originality alongside the use of technology in education.

Conclusion :

In summary, the incorporation of technology into the realm of education presents a complex and multifaceted landscape. While it undeniably brings forth a multitude of benefits, such as personalized learning, enhanced student engagement, and expanded access to knowledge, it does not come without its share of challenges. These challenges encompass potential health risks, the allure of distractions, and the risk of stifling creativity. The overuse or misuse of technology can even detrimentally impact academic performance and impair students' concentration on their educational tasks. The key to successfully harnessing the power of technology in education lies in finding equilibrium, where the advantages are maximized, and the disadvantages are mitigated. Striking this balance is crucial to ensure that technology remains a potent instrument for learning and development. Educators and educational institutions must navigate these challenges judiciously, providing the necessary guidance and resources to make the most of technology's potential in the ever-evolving landscape of modern education. By doing so, we can harness the transformative capabilities of technology to empower and inspire the learners of today and tomorrow.

References :

- Anderson, J. R., Reder, L. M., & Simon, H. A. "Applications and Misapplications of Cognitive Psychology to Mathematics Education." Texas Tech University, Center for Research in Mathematical Sciences, 1985.
- Bulman, G., & Fairlie, R. W. TECHNOLOGY AND

Learning Beyond the Classroom : Higher Education for a Changing World

EDUCATION: COMPUTERS, SOFTWARE, AND THE INTERNET. NBER WORKING PAPER SERIES, 1–67. 2016. <https://doi.org/10.3386/w22237>

- Dede, C. "Emerging Technologies in Distance Education." American Journal of Distance Education, vol. 10, no. 2, 1996, pp. 4-36.
- Keegan, D. Foundations of Distance Education. Routledge, 1996.
- Dalgarno, B., & Lee, M. J. "What Are the Learning Affordances of 3-D Virtual Environments?" British Journal of Educational Technology, vol. 41, no. 1, 2010, pp. 10-32.
- Huang, Y. M., & Huang, Y. M. "Immersive 3D Augmented Reality for Science Teaching and Learning." In Augmented and Virtual Reality, Springer, 2019, pp. 15-35.
- Simuforsa, M. "The Impact of Modern Technology on the Educational Attainment of Adolescents." International Journal of Education and Research, vol. 1, no. 9, 2013, pp. 1-8. Retrieved April 29, 20AD, from <http://www.ijern.com/journal/September-2013/23.pdf>.
- Strom, A. "The Negative Effects of Technology for Students and Educators." NW Commons, 2021, pp. 1-33.
- Vygotsky, L. S. Mind in Society: The Development of Higher Psychological Processes. Harvard University Press, 1978.



HUMAN RIGHTS

in a Changing World :
Challenges and Opportunities

-: Editor :-

Dr. Yogesh D.Ugale

PROSPERITY
RULE OF LAW

DIGNITY
HOPE

EQUALITY
JUSTICE

www.eagleleappublication.com

INDEX

Sr. No.	Title & Author	Pg No.
01.	Challenge and opportunities in the modern human rights era Dr. Yogesh Dadarao Ugale	1
02.	Human Rights of 'Dalit Women' in India: Challenges and Initiatives Prof. Rajendra S. Korde	15
03.	Human Rights in a Changing World : Challenges and Opportunities Dr. Maya S. Watane	28
04.	Balancing Act: Human Rights Challenges and Opportunities Dr. Ashish D. Kale	37
05.	Human Rights in a Changing World: Challenges and Opportunities Dr. A. D. Jadhao	51
06.	Historical Development of Human Rights in India Dr. Harshal R. Nimbhorkar	60
07.	Global Perspectives on Human Rights Challenges Dr. Mallikarjun I Minch	67
08.	मानवाधिकार की वैश्वीक चुनौतियाँ एवं समाधान प्र. एस. आर. सामृतवार	72
09.	संविधान कलम २१ जीवित आणि व्यक्तीगत स्वातंत्र्य संदर्भात न्यायालयाची भूमिका डॉ. प्रशांत विद्ये	79
✓ 10.	<u>भारतातील मानव अधिकार आणि महिला</u> डॉ. संतोष कायदे	89
11.	भारतातील मानवी हक्कामधील आव्हाने प्र. डॉ. मिलिंद गजभिये	97

१०

भारतातील मानव अधिकार आणि महिला

डॉ. संतोष कायंदे,

प्राध्यापक व राज्यशास्त्र विभाग प्रमुख
श्री शिवाजी महाविद्यालय अकोट

Mo:9421748782, Mail id : skayande09gmail.com

सारांश :

भारतामध्ये मानव अधिकाराला संविधानिक स्थान प्राप्त झाले आहे. संविधानाच्या तिसऱ्या व चौथ्या प्रकरणांमध्ये यासंबंधीची तरतूद केलेली आहे. भारतीय संस्कृती पुरुषप्रधान संस्कृती आहे. सामान्यपणे समाजामध्ये स्त्रियांना नेहमीच दुय्यम स्थान देण्यात आले आहे. परिणामी आपल्या मानव अधिकारासाठी स्त्रियांना अधिक संघर्ष करावा लागतो. संविधानिक तरतूद आणि कायदे असूनही महिलांच्या मानव अधिकार हाणनासंबंधी आणि त्यांच्यावर होणाऱ्या अन्याय अत्याचारासंबंधीच्या घटना वाढतच चालल्या आहेत. या पार्श्वभूमीवर भारतातील महिलांच्या मानव अधिकारासंबंधीची स्थिती स्पष्ट करून त्यासंबंधी काही उपाय सुचविण्याचा प्रस्तुत शोधनिबंधाचा उद्देश आहे.

संविधानिक स्थिती :

भारताच्या संविधानामध्ये धर्म, जात, वंश, लिंग, वर्ण व रंग या आधारावर भेदभाव न करता सर्वांना समान समजले आहे आणि सर्वांना राजकीय, नागरी, आर्थिक, सामाजिक, धार्मिक व सांस्कृतिक अधिकार प्रदान केले आहेत. संबंधित अधिकार संविधानाच्या तिसऱ्या भागात मूलभूत अधिकाराच्या अंतर्गत समाविष्ट आहेत. संबंधित अधिकार अनुलंगणीय असून त्याचे उल्लंघन झाल्यास न्यायालयात दाद मागता येते. इतकेच नाही तर संसद सुद्धा संविधानामध्ये दुरुस्ती करून या अधिकाराचा संकोच करू शकत नाही.

संविधानामध्ये अनुच्छेद १४, १५ (१), १६ (१), १९ (१) (क), १९ (२) (ख), २०, २१, २५ असे आहेत ज्यामध्ये मानव अधिकारासंबंधी तरतूद केलेली आहे. संविधानाच्या चौथ्या भागात अनुच्छेद ३६ ते ५१ पर्यंत राज्यनीतीच्या मार्गदर्शक तत्त्वासंबंधी तरतूद केली आहे. हा भाग न्यायालयीन संरक्षणाखाली नसला तरी मानव अधिकाराच्या दृष्टीने अधिक महत्त्वाचा ठरतो.

शिवाय संविधानाच्या अनुच्छेद ३२५ नुसार स्त्री आणि पुरुष अशा दोहोंना मतदानाचा समान अधिकार प्रदान केला आहे.

संविधानिक स्थिती :

संविधानिक तरतुदी शिवाय महिलांसाठी अनेक महत्त्वपूर्ण कायदे करण्यात आले आहेत. त्यामध्ये प्रत्यक्ष महिलांसाठी आणि महिलांशी संबंधित अशा दोन्ही प्रकाराचा समावेश होतो. त्यापैकी अनैतिक व्यापार प्रतिबंध कायदा १९५६, हुंडा प्रतिबंध कायदा १९६१-१९८६, महिला असभ्य प्रदर्शन प्रतिबंध कायदा १९८७, सती आयोग प्रतिबंध कायदा १९८७, कौटुंबिक हिंसेपासून महिलांना संरक्षण कायदा २००५ या प्रमुख कायद्यांचा समावेश प्रत्यक्ष महिलांसाठी केलेल्या कायद्यांमध्ये होतो. तर महिलांशी संबंधित असलेल्या अन्य कायद्यांची संख्या ४० पेक्षा जास्त आहे.

वास्तविक स्थिती :

आपल्या देशामध्ये महिलांच्या स्थितीमध्ये प्राचीन काळापासून अनेक स्थित्यंतरे घडून आली आहेत. वैदिक काळात महिलांना पुरुषांच्या बरोबरीचे समान स्थान होते. शिक्षणामुळे महिलांच्या बाबतीत सन्मानाची भावना होती. या संबंधीचा उल्लेख मनुस्मृतीमध्ये आढळतो. मध्यकाळात अनेक आक्रमणे झाली. ज्यामुळे समाजाची सुरक्षितता धोक्यात आली. त्याचा परिणाम शिक्षण व्यवस्थेवर झाला. शिक्षण आणि साहित्यापासून महिलांचा संपर्क नष्ट झाला. याच काळात महिला खऱ्या अर्थाने पडद्याच्या आत बंदी झाली. आधुनिक काळातील महिला जीवनाच्या प्रत्येक क्षेत्रामध्ये पुरुषांच्या बरोबरीने कार्य करीत आहे. असे असले तरी ती आधीपेक्षा अधिक असुरक्षित झाली आहे.

आंतरराष्ट्रीय महिला वर्ष, महिला दशक, इंटरनॅशनल इयर ऑफ गर्ल चाइल्ड आणि महिला सबलीकरण वर्ष २००१ साजरे करण्यात आले. यावरून हेच सिद्ध होते की स्वातंत्र्यानंतर ७५ वर्षांचा काळ झाला असला तरी संविधानाने प्रदान केलेल्या मानव अधिकारापासून महिला वंचित राहिल्या आहेत.

टाइम्स ऑफ इंडिया प्रकाशनाच्या महिला समस्यांवर आधारित मासिकाच्या अंकामध्ये संपादकीय लेखात महिलांच्या शोषणासंबंधी असे लिहिले होते-लगता था आजादी के बाद महिलाओ की स्थिती भी बेहतर होगी नई आधुनिकता समाज मे जागृती लायेगी और महिलाए पुरुषो की तरह समाज मे समान अवसर पाकर एक नये समाज की संरचना मे हात बटायेगी, लेकिन दुर्भाग्य से वैसा हुआ नहीं है। महिलाये आगे जरूर आई है और आज लगभग हर क्षेत्र में वह पहिले की तुलना मे जादा दिखाई दे रही है पर महिला उत्पीडण की घटनाये कम नहीं हुई है। यह भी एक सच्चाई है की उत्पीडन के तोर तरीको मे भलेही फर्क हो, पर शहरी और ग्रामीण स्त्रिया समान रूप से अवहेलना, उपेक्षा और दमन की शिकार हो रही है

महिलांच्या मानव अधिकाराचे संरक्षण करण्यासंबंधी असलेल्या कायद्याच्या बाबतीत आणि राष्ट्रीय महिला आयोगासंबंधी सामान्य जनतेमध्ये विशेषतः ग्रामीण भागामध्ये जनजागृती केली पाहिजे. त्यासाठी शासन, राष्ट्रीय मानव अधिकार आयोग, राष्ट्रीय महिला आयोग, स्वयंसेवी संघटना अशा सर्व स्तरातून सकारात्मक प्रयत्नाची गरज आहे.

भारतातील मानव अधिकार आणि महिला :

मानव अधिकार मानव जातीच्या विकासासाठी आणि मानवाच्या प्रतिष्ठेसाठी मूलभूत अशी बाब आहे. मानव आपल्या अधिकारासाठी जागतिक स्तरावर प्रयत्न करीत असून विविध मार्गाने संघर्ष करीत आहे. यासंबंधीचा इतिहास अतिशय प्राचीन आहे. सन १२१५ चा मॅग्रा कार्टा, १६७९ चा बंदी प्रत्यक्ष करण अधिनियम, १६२८ चा पिटीशन ऑफ राइट्स, १६८९ चा बिल ऑफ राइट्स, १७७६ चे अमेरिकन स्वातंत्र्याचे घोषणापत्र, १७८९ ची फ्रान्सची मानव अधिकारासंबंधीची घोषणा आणि सन १९४८ चा संयुक्त राष्ट्रसंघाचा मानवी अधिकाराचा जाहीरनामा या बाबी मानव अधिकार प्राप्त करण्यासाठी कराव्या लागलेल्या संघर्षाच्या इतिहासातील महत्त्वाचे टप्पे आहेत.

भारतामध्ये मानव अधिकाराला संविधानिक स्थान प्राप्त झाले आहे. संविधानाच्या तिसऱ्या व चौथ्या प्रकरणांमध्ये यासंबंधीची तरतूद केलेली आहे. भारतीय संस्कृती पुरुषप्रधान संस्कृती आहे. सामान्यपणे समाजामध्ये स्त्रियांना नेहमीच दुय्यम स्थान देण्यात आले आहे. परिणामी आपल्या मानव अधिकारासाठी स्त्रियांना अधिक संघर्ष करावा लागतो. संविधानिक तरतूद आणि कायदे असूनही महिलांच्या मानव अधिकार हाणनासंबंधी आणि त्यांच्यावर होणाऱ्या अन्याय अत्याचारासंबंधीच्या घटना वाढतच चालल्या आहेत. या पार्श्वभूमीवर भारतातील महिलांच्या मानव अधिकारासंबंधीची स्थिती स्पष्ट करून त्यासंबंधी काही उपाय सुचविण्याचा प्रस्तुत शोधनिबंधाचा उद्देश आहे.

संविधानिक स्थिती :

भारताच्या संविधानामध्ये धर्म, जात, वंश, लिंग, वर्ण व रंग या आधारावर भेदभाव न करता सर्वांना समान समजले आहे आणि सर्वांना राजकीय, नागरी, आर्थिक, सामाजिक, धार्मिक व सांस्कृतिक अधिकार प्रदान केले आहेत. संबंधित अधिकार संविधानाच्या तिसऱ्या भागात मूलभूत अधिकाराच्या अंतर्गत समाविष्ट आहेत. संबंधित अधिकार अनुलंगणीय असून त्याचे उल्लंघन झाल्यास न्यायालयात दाद मागता येते. इतकेच नाही तर संसद सुद्धा संविधानामध्ये दुरुस्ती करून या अधिकाराचा संकोच करू शकत नाही.

संविधानामध्ये अनुच्छेद १४, १५ (१), १६ (१), १९ (१) (क), १९ (२) (ख), २०, २१, २५ असे आहेत ज्यामध्ये मानव अधिकारासंबंधी तरतूद केलेली आहे. संविधानाच्या चौथ्या

अनुच्छेद ३६ ते ५१ पर्यंत राज्यनीतीच्या मार्गदर्शक तत्त्वासंबंधी तरतूद केली आहे. हा भाग संविधानाच्या अनुच्छेद ३२५ नुसार स्त्री आणि पुरुष अशा दोहोंना मतदानाचा समान अधिकार प्रदान केला आहे.

संविधानिक स्थिती :

संविधानिक तरतुदींशिवाय महिलांसाठी अनेक महत्त्वपूर्ण कायदे करण्यात आले आहेत. यांमध्ये प्रत्यक्ष महिलांसाठी आणि महिलांशी संबंधित अशा दोन्ही प्रकारचा समावेश होतो. त्यापैकी नैतिक व्यापार प्रतिबंध कायदा १९५६, हुंडा प्रतिबंध कायदा १९६१-१९८६, महिला असभ्य दर्शन प्रतिबंध कायदा १९८७, सती आयोग प्रतिबंध कायदा १९८७, कौटुंबिक हिंसेपासून महिलांना संरक्षण कायदा २००५ या प्रमुख कायद्यांचा समावेश प्रत्यक्ष महिलांसाठी केलेल्या कायद्यांमध्ये होतो. तर महिलांशी संबंधित असलेल्या अन्य कायद्यांची संख्या ४० पेक्षा जास्त आहे. यांमध्ये भारतीय दंड संहिता १८६०, भारतीय साक्ष कायदा १८७२, विवाहित महिला मालमत्ता कायदा १८७४, बाल प्रतिबंध कायदा १९२९, मुस्लिम व्यक्ति (शरीयत) कायदा १९३७, किमान वेतन कायदा १९४८, कंपनी कायदा १९४८, हिंदू विवाह कायदा १९५५, विदेशी विवाह कायदा १९६९, भारतीय तलाक कायदा १९६९, गुन्हेगारी प्रक्रिया संहिता १९७३, कौटुंबिक न्यायालय कायदा १९८४, मानसिक आरोग्य कायदा १९८७, महिलांसाठी राष्ट्रीय आयोग कायदा १९९०, मानव अधिकार संरक्षण कायदा १९९३ यांचा प्रामुख्याने समावेश होतो. त्यापैकी भारतीय दंड संहिता कायदा महिलांच्या मानव अधिकारांच्या संरक्षणासाठी अधिक महत्त्वाचा ठरतो. छेडछाड, अपहरण, बलात्कार, हत्या असे सर्व गुन्हे दंडसंहितेला अनुसरून शिक्षापात्र गुन्हे आहेत. यासंबंधी दंड संहितेच्या कलम ३६३, ३६६ ए, ३५४, ५०९, ३६७, ३७३, ३७५, ३७६ व ३७७ मध्ये शिक्षेची तरतूद केली आहे. महिलांच्या असभ्य प्रदर्शनाला रोखण्यासंबंधी भारतीय दंड संहितेच्या कलम २४२, २९३ आणि २९४ मध्ये तरतूद केलेली आहे. महिलांच्या मानव अधिकारांच्या संरक्षणासाठी दंड संहितेचे कलम ९८, ५१-२ आणि १६७ अधिक महत्त्वपूर्ण आहे. दुसरी महत्त्वाची बाब म्हणजे महिलांच्या मानव अधिकारांचे संरक्षण करण्यासाठी सन १९९० मध्ये महिला आयोग अधिनियम संमत केला गेला. त्याला अनुसरून १९९२ मध्ये राष्ट्रीय महिला आयोगाची स्थापना झाली. मानव अधिकारांच्या उल्लंघना संबंधीच्या बाबींवर राष्ट्रीय महिला आयोगाला सक्रिय कारवाई करण्याचा अधिकार आहे. जर कारागृहामध्ये किंवा पोलीस संरक्षणामध्ये मानव अधिकारांचे उल्लंघन झाल्याचे सिद्ध होत असेल तर कारागृह अधिकारी आणि पोलीस यांच्याविरुद्ध कारवाई करण्याचा अधिकारही आयोगाला आहे. महिलांना स्वातंत्र्य, समता व न्याय प्राप्त करून देण्याच्या दृष्टीने प्रयत्न करणे, महिलांचे शोषण थांबविणे आणि महिलांच्या सबलीकरणासाठी सकारात्मक उपाय योजून राष्ट्रीय विकासात सकारात्मक योगदान देण्याचा आयोगाचा उद्देश आहे.

वास्तविक स्थिती :

आपल्या देशामध्ये महिलांच्या स्थितीमध्ये प्राचीन काळापासून अनेक स्थित्यंतरे घडून आली आहेत. वैदिक काळात महिलांना पुरुषांच्या बरोबरीचे समान स्थान होते. शिक्षणामुळे महिलांच्या बाबतीत सन्मानाची भावना होती. यासंबंधीचा उल्लेख मनुस्मृतीमध्ये आढळतो. मध्यकाळात अनेक आक्रमणे झाली. ज्यामुळे समाजाची सुरक्षितता धोक्यात आली. त्याचा परिणाम शिक्षण व्यवस्थेवर झाला. शिक्षण आणि साहित्यापासून महिलांचा संपर्क नष्ट झाला. याच काळात महिला खऱ्या अर्थाने पडद्याच्या आत बंदी झाली. आधुनिक काळातील महिला जीवनाच्या प्रत्येक क्षेत्रामध्ये पुरुषांच्या बरोबरीने कार्य करीत आहे. असे असले तरी ती आधीपेक्षा अधिक असुरक्षित झाली आहे.

आंतरराष्ट्रीय महिला वर्ष, महिला दशक, इंटरनॅशनल इयर ऑफ गर्ल चाइल्ड आणि महिला सबलीकरण वर्ष २००१ साजरे करण्यात आले. यावरून हेच सिद्ध होते की स्वातंत्र्यानंतर ७५ वर्षांचा काळ झाला असला तरी संविधानाने प्रदान केलेल्या मानव अधिकारापासून महिला वंचित राहिल्या आहेत. महिलांच्या मानव अधिकारासंबंधी संविधानिक तरतूद आणि अनेक कायदे असूनही महिलांचे शोषण आणि त्यांच्यावर होणाऱ्या अत्याचाराच्या घटना कमी न होता वाढतच चालल्या आहेत. महिलांवर होणाऱ्या अत्याचारांचे अनेक प्रकार आहेत. उदाहरणार्थ भ्रूणहत्या, शिशु कन्या हत्या, कुटुंबामध्ये मुलींच्या शिक्षण व आरोग्याची होणारी उपेक्षा, हुंडाबळी, बलात्कार, कौटुंबिक हिंसा व लहान वयात होणारे विवाह इत्यादी. भारतीय समाजामध्ये लांचनास्पद असलेली गोष्ट म्हणजे मुलीला जन्माच्या आधीच मारून टाकण्याची प्रथा होय. अशी प्रथा प्राचीन काळापासून चालत आलेली आहे. त्यामुळे स्त्रीच्या जन्म घेण्याच्या निसर्गदत्त अधिकारावरच गदा आली आहे. युनिसेफच्या एका अहवालानुसार संपूर्ण जगामध्ये पुरुष महिला प्रमाण १००-१०५ आहे. जिथे भारतामध्ये हेच प्रमाण १००-९३ असे खाली आले आहे. छ सन २००१ ची भारताची आकडेवारी पाहिल्यास असे लक्षात येते की भारतामध्ये १००० पुरुषांमागे महिलांची संख्या ९३३ इतकी आहे. शून्य ते सहा वर्ष वयोगटातील प्रति हजार पुरुष बालकाच्या तुलनेमध्ये स्त्री बालकाची संख्या सतत कमी होत चालली आहे. ही संख्या ९६२ वरून ९२७ पर्यंत खाली आली आहे. ज्या राज्यांमध्ये ही प्रवृत्ती अधिक पाहायला मिळते त्यामध्ये हिमाचल प्रदेश, पंजाब, हरियाणा, उत्तरांचल, गुजरात, महाराष्ट्र यांचा प्रामुख्याने समावेश होतो. भारतातील काही राज्यांमध्ये मुलींच्या हत्येची प्रथा अजूनही प्रचलित असल्याचे चित्र पहावयास मिळते. यामध्ये राजस्थानचा प्रामुख्याने उल्लेख करावा लागेल. राजस्थानमध्ये विशेषतः पश्चिम भागातील जिल्ह्यांमध्ये दहा हजार लोकसंख्येच्या गावांमध्ये युवक स्त्रींची संख्या केवळ पन्नास आहे. १९९८ मध्ये राज्यातील देवोरा गावामध्ये जेव्हा ११५ वर्षानंतर पहिल्यांदा एका मुलीचे लग्न झाले तेव्हा देओरा गाव आंतरराष्ट्रीय चर्चेचा विषय बनले होते. विकसित देशांच्या तुलनेत भारतामध्ये गर्भावस्थेमुळे होणाऱ्या महिलांच्या मृत्यूचे प्रमाण जास्त आहे.

जास्त असते. २०१० चा मानव विकास अहवाल हे सांगतो की लिंग समानतेच्या दृष्टीने भारताची स्थिती पाकिस्तान खरे पाहता अफगाणिस्तान सोडून यासंबंधी भारताचे स्थान दक्षिण आशियामध्ये मातृत्व मृत्युदरही भारतात पाकिस्तान पेक्षा जास्त आहे. जिथे पाकिस्तान मध्ये एक लाख जिवंत मुलींपैकी ३२० बालकांचा मृत्यू होतो तिथे भारतामध्ये बालकांच्या मृत्यूचे प्रमाण १०० आहे.

शिक्षणाच्या दृष्टीने विचार केल्यास अजूनही ग्रामीण भागामध्ये मुलींच्या शिक्षणाकडे अक्षम्य दुर्लक्ष केल्या जाते. मुलांच्या शिक्षणावर ज्याप्रकारे खर्च केला जातो तसा खर्च मुलींच्या बाबतीत केला जात नाही. त्यामुळे महिलांच्या शिक्षणासारख्या मूलभूत अधिकाराचे हनन मोठ्या प्रमाणात होते. शिक्षणामुळे महिलांमध्ये आत्मविश्वास आणि आपल्या अधिकाराच्या बाबतीत जागृती निर्माण होऊन अन्यायाविरुद्ध लढण्याची नैतिक शक्ती प्राप्त होते. ग्रामीण आणि शहरी भागांमध्ये महिला साक्षरतेचे प्रमाण विषम आहे. ग्रामीण साक्षरतेचे प्रमाण ५९% तर शहरी भागामध्ये ८० टक्के आहे. महिलांवर होणाऱ्या अत्याचारासंबंधी सर्वात वाईट गोष्ट म्हणजे कौटुंबिक हिंसेतून होणारे महिलांचे शोषण होय. एका अभ्यासानुसार ४०% पेक्षा अधिक भारतीय विवाहित महिला कौटुंबिक हिंसेपासून शोषित आहेत. अशाप्रकारचे शोषण सामाजिक, आर्थिक व राजकीय दृष्टीने सामर्थ्यशाली असलेल्या लोकांद्वारा केले जाते. महिलांना मारहाण करण्याच्या बाबतीत बिहारचा सर्वात वरचा क्रमांक लागतो. त्यानंतर आसाम, पश्चिम बंगाल, उत्तर प्रदेश आणि तामिळनाडू यांचा क्रमांक लागतो. बिहारमध्ये यासंबंधीचे प्रमाण ५९% तर उपरोक्त राज्यांमध्ये हेच प्रमाण ४० ते ४६ टक्के आहे. क महिलांच्या अपहरण प्रकरणात पोलिसांचा दृष्टिकोन साधारणपणे नकारात्मक स्वरूपाचा आढळतो. यासंबंधीचे एक तथ्य असे आहे की अपहरण करणाऱ्या व्यक्तीच्या दबावामुळे अपहरण झालेल्या महिला सभासदाच्या कुटुंबातील सभासद पोलिसांमध्ये रिपोर्ट करीत नाहीत. कुटुंबातील इतर सभासदांचे अपहरण किंवा अपहृत महिला सभासदाला मारून ठारण्याची भीती रिपोर्ट न करण्यामागे असते. हुंड्यासारख्या सामाजिक कुप्रथेमुळे अनेक महिलांचे जीवन उध्वस्त झाले आहे. याचा सर्वाधिक परिणाम नवविवाहित महिलांवर होतो. हुंड्याशी संबंधित महिलांच्या शोषणाविरुद्ध इतर गुन्ह्यांच्या तुलनेत पोलिसांनी सक्रिय भूमिका पार पाडण्याची अपेक्षा असते. यासंबंधीच्या अभ्यासातील एक निष्कर्ष असा आहे की हुंड्याशी संबंधित गुन्ह्यांची नोंद करून त्यासंबंधी योग्यती तपासणी करीत असल्याचे म्हणणाऱ्या पोलिसांचे प्रमाण ९०% आहे. बलात्कार, सामाजिक अन्याय आणि हुंड्यासारख्या कुप्रथेमुळे महिलांचे जीवन असुरक्षित झाले आहे. बलात्कार म्हणजे महिलांवर होणाऱ्या अत्याचाराचा राक्षसी प्रकार होय. यासंबंधीच्या घटनांमध्ये ११५ महिलांमध्ये ११५ महिलांमध्ये घटनांमुळे संपूर्ण समाजाची मान खाली झुकल्याशिवाय राहत नाही. महत्वाची बाब म्हणजे बलात्कारांनी पीडित महिलांपैकी पोलिसांमध्ये येणाऱ्यांची संख्या अत्यंत कमी असते. बराबरा टोनर

यांनी *द फॅक्ट्स ऑफ रेप* मध्ये लिहिले आहे की ज्या महिलांसोबत अत्यंत वाईट परिस्थितीत बलात्कार झाला असेल अशाच महिला पोलिसांपुढे येतात. मानव संसाधन मंत्रालयाच्या महिला व बालविकास विभागाच्या अहवालानुसार भारतामध्ये प्रत्येक ५४ मिनिटाला एक महिला बलात्कार, ५१ मिनिटाला छेडछाड, २६ मिनिटाला गैरवर्तणूक तर १०२ मिनिटाला हुंड्यासाठी हत्या केली जाते, सन २००७-२००८ च्या राष्ट्रीय महिला आयोगाच्या वार्षिक अहवालानुसार महिलांवर होणाऱ्या विविध अत्याचारासंबंधी राष्ट्रीय महिला आयोगाकडे आलेल्या तक्रारींची एकूण संख्या १५८५४ इतकी होती. यामध्ये सर्वात जास्त तक्रारी म्हणजे ८२०० उत्तरप्रदेश मधून आल्या होत्या.

टाइम्स ऑफ इंडिया प्रकाशनाच्या महिला समस्यांवर आधारित मासिकाच्या अंकामध्ये संपादकीय लेखात महिलांच्या शोषणासंबंधी असे लिहिले होते-लगतता था आजादी के बाद महिलाओ की स्थिती भी बेहतर होगी नई आधुनिकता समाज मे जागृती लायेगी और महिलाए पुरुषो की तरह समाज मे समान अवसर पाकर एक नये समाज की संरचना मे हात बटायेगी, लेकिन दुर्भाग्य से वैसा हुआ नहीं है। महिलाये आगे जरूर आई है और आज लगभग हर क्षेत्र में वह पहिले की तुलना मे जादा दिखाई दे रही है पर महिला उत्पीडण की घटनाये कम नहीं हुई है। यह भी एक सच्चाई है की उत्पीडन के तोर तरीको मे भलेही फर्क हो, पर शहरी और ग्रामीण स्त्रिया समान रूप से अवहेलना, उपेक्षा और दमन की शिकार हो रही है।

निष्कर्ष व उपाय :

- १) महिलांच्या मानव अधिकाराच्या संरक्षणासाठी करण्यात आलेल्या काही महत्त्वपूर्ण कायद्यामध्ये असलेली अस्पष्टता दूर करून यासंबंधीच्या कायद्यामध्ये एकरूपता आणली पाहिजे. जसे हिंदू विवाह अधिनियम १९५५, हिंदू अल्पसंख्यांक अधिनियम १९५६ आणि बालविवाह अधिनियम २००६.
- २) बालविवाहाच्या कुप्रथेमुळे स्त्रियांच्या मानव अधिकाराचे होणारे हनन रोखण्यासाठी यासंबंधीच्या कायद्यात कठोर तरतूद केली पाहिजे. यासंबंधीचे एक अनुमान असे आहे की अर्ध्यापेक्षा जास्त विवाह कायद्याद्वारा निर्धारित केलेल्या वयाच्या आधीच केले जातात. यासंबंधीच्या कायद्यामध्ये विवाह साठी मुलाचे आणि मुलीचे वय अनुक्रमे २१ व १८ निर्धारित केले आहे. यामध्ये बदल करून मुलीचे वय २१ आणि मुलाचे वय २४ वर्ष केले पाहिजे. पाँडिचेरीमध्ये मुलीसाठी २० तर मुलांसाठी २६.४ वर्षे वयाची अट निर्धारित केलेली आहे.
- ३) महिलांवर होणाऱ्या विविध अत्याचारांच्या बाबतीत पोलिसांनी सकारात्मक दृष्टिकोनातून आपली भूमिका प्रभावीपणे पार पाडली पाहिजे. विशेषतः रात्रीच्या वेळी काम करणाऱ्या महिलांसाठी प्रवासामध्ये संरक्षण पुरविले पाहिजे. प्रसंगी महिलांसाठी वाहनाची व्यवस्था केली पाहिजे. यासंबंधी दिल्ली पोलिसांनी केलेली व्यवस्था उत्तम म्हणावी लागेल. त्याची व्याप्ती सर्वदूर

होणे गरजेचे आहे.

- ४) स्त्री भ्रूणहत्येमुळे स्त्री -पुरुष प्रमाणामध्ये निर्माण झालेले अंतर कमी करण्यासाठी राज्यस्तरावर काही प्रोत्साहन पर योजना राबविली पाहिजे. यासंबंधी हरियाणातील फतेहबाद जिल्ह्यातील दुलात गावाचा आदर्श सर्वांनी घेण्यासारखा आहे. या गावाने जानेवारी ते डिसेंबर २०१० या काळात पुरुष- स्त्री प्रमाण १४- ३४ असे साध्य केले. त्यासाठी हरियाणा सरकारने या गावाचा पाच लक्ष रुपये पुरस्कार देऊन गौरव केला होता.
- ५) महिलांनी आपल्या अधिकारासंबंधी जागृत होऊन आपले शोषण थांबविण्यासाठी स्वतः लढले पाहिजे. त्यासाठी महिलांच्या सबलीकरणाची गरज आहे. शासनाच्या सर्वच खात्यांनी आपल्या खर्चाच्या ३०- ४०% खर्च हा महिला सबलीकरणासाठी केला पाहिजे. यासंबंधीची शिफारस स्वतः राष्ट्रीय महिला आयोगाने शासनाला केली आहे.
- ६) महिलांच्या मानव अधिकाराच्या संवर्धन आणि संरक्षणाच्या दृष्टीने गैरसरकारी संघटनेची भूमिका महत्त्वाची ठरते. अशा संघटनांना आपली भूमिका पार पाडताना अनेक अडचणींचा सामना करावा लागतो. अशास्थितीत गैरसरकारी संघटनांना आवश्यक स्वरूपाची मदत किंवा सहाय्य पुरविले पाहिजे. यासंबंधी स्टॉप या गैरसरकारी संघटनेचे उदाहरण बोलक्या स्वरूपाचे आहे. स्टॉप ही संघटना मानव व्यापाराच्या विरुद्ध असलेले एक अभियान आहे.
- ७) महिलांच्या मानव अधिकाराचे संरक्षण करण्यासंबंधी असलेल्या कायद्याच्या बाबतीत आणि राष्ट्रीय महिला आयोगासंबंधी सामान्य जनतेमध्ये विशेषतः ग्रामीण भागामध्ये जनजागृती केली पाहिजे. त्यासाठी शासन, राष्ट्रीय मानव अधिकार आयोग, राष्ट्रीय महिला आयोग, स्वयंसेवी संघटना अशा सर्व स्तरातून सकारात्मक प्रयत्नाची गरज आहे.

संदर्भ :

- १) सिंह, राजबाला, मानवाधिकार और महिलाए, पृष्ठ १२०.
- २) राष्ट्र महिला मासिक-नोव्हेंबर २०१०, पृष्ठ १.
- ३) राष्ट्र महिला मासिक -फेब्रुवारी २०११, पृष्ठ १.
- ४) अन्सारी, एम. ए., नारी चेतना और अपराध, पृष्ठ ११७-११८.
- ५) कुल्हरी, सुमन, महिला एवम मानवाधिकार, पृष्ठ १४२.
- ६) जो बॉक्सटर व लॉरेन्स काफमेन, क्राईम अगेन्स्ट टू मॅन, पृष्ठ १२५.
- ७) सिंह, राजबाला, मानवाधिकार और महिलाए, पृष्ठ १२५.
- ८) कुल्हरी, सुमन, महिला एवम मानवाधिकार, पृष्ठ १३७.

- National Level Publication
- Central Govt. of India Approved Publication
- ISBN Approved Publication
- ISO 9001-2015 Certified Publication
- 25 Years Experience Holder Publication

CERTIFICATE

This is to certify that a **A Text Book of Zoology**, B.Sc. Part-II Semester- IV, First Edition : January 2024; **ISBN No. .978-93-93940-38-4** has been written by following teaching faculties.

Dr. Mrs. R. P. Tekade

Assistant professor

Late RB Arts Comm and Smt SR Bharti science College, Arni Yavatmal.

Dr. Seema Virbhan Keswani

Assistant professor and Head of Department

M.S.P. Arts, Science and K.P.T. Commerce College, Manora.Dist.Washim

Dr. Pratibha S. Mahalle

Assistant professor and Head of Department

Vinayak Vidnyan Mahavidyalaya, Nandgaon Khandeshwar, Dist.Amravati

Miss. Snehal G. Rodge

Assistant professor

Shri Shivaji Art, Commerce And Science College, Akot, Dist. Akola

Miss. Snehal G. Rodge

Assistant professor

Shri Shivaji Art, Commerce And Science College, Akot, Dist. Akola

Ms. Bhagyashri K. Lohakar

Assistant professor

Indria Gandhi Kala Mahavidyalaya, Ralegaon, Dist. Yeotmal

Mr. Anil N. Khade

Assistant professor

Shri Vitthal Rukhmini Mahavidyalaya, Sawana, Dist. Yeotmal

This Book has been Edited by- **Dr. Pankaj W. Chaudhari**, Assistant Professor and Head of Department, Shri Vitthal Rukhmini Mahavidyalaya, Sawana, Tq. Mahagaon Dist. Yavatmal., **Dr. Sudhir G. Chirde**, Assistant Professor, Art, Commerce and Science College, Maregaon, District Yavatmal. **Dr. Nandkishor E. Warghat**, Assistant Professor, Arts and Science College, Pulgaon, Dist. Wardha.

Date : 20 January 2024

Place : Amravati



(Ravindra B. Dahake)

Nabh Prakashan



Taxonomy of Angiosperms



Dr. S.N. Patole

Taxonomy of Angiosperms

This book entitled Taxonomy of Angiosperms is a compilation work and embodies a fairly comprehensive treatment of the fundamental facts and aspects of botany. Taxonomy is one of the oldest biological disciplines. This book presents an account of general principles and aims of taxonomy in a comprehensive manner. It has been written mainly to cater the needs of undergraduate students pursuing courses in Botany/Life Sciences/Plant Sciences, but it will be useful for postgraduate students of these disciplines as well. Finally, the book covers the different aspects and theories related to the origin of angiosperms, and elucidate the methods and techniques of herbarium development and maintenance.

Contents: Introduction to Angiosperm Taxonomy • History of Taxonomy • Types of Taxonomy, Identification, Nomenclature and Classification • Herbarium • Botanical Nomenclature • Botanical Nomenclature • Plant Structure • Systems of Classification • Magnoliid Families • Monocotyledons Families



Dr. S.N. Patole obtained his M.Sc. Botany degree with specialization in Angiosperms Taxonomy in first division from Sant Gadge Baba Amravati University, Amravati. He was awarded Ph. D. Degree in Botany by Jiwaji University, Gwalior, Madhya Pradesh. He has published about 25 research papers in peer reviewed Journals of National and International repute. He has completed Minor Research Project funded by UGC, WRO, Pune. He has attended several national and international level conferences. He is recognized research guide in Sant Gadge Baba Amravati University, Amravati.

Dr. S.N. Patole has 18 years of teaching experience. He is presently working as Associate Professor, Department of Botany, Shri Shivaji Arts, Commerce & Science College, Akot, Dist. Akola, Maharashtra.

ISBN : 9789355245953



₹ 2495/-



Oxford Book Company

Publishers • Distributors • Exporters

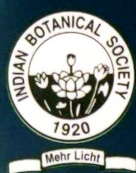
Email: oxfordbookpr@gmail.com

Website: www.oxfordbookcompany.com

Distributed by :

KEYA INTERNATIONAL PRESS LLP

161-130 "Bony Residency", Gate No. 2,
Opp. Tilak Public School, Vishveshvariya Nagar,
Gopalpura Road, Jaipur-302018 (Raj.)
Ph. : 0141-2761280, 2761381
E-mail: keyainternationalpressllp@gmail.com



XLVI ALL INDIA BOTANICAL CONFERENCE
of
THE INDIAN BOTANICAL SOCIETY
and INTERNATIONAL SYMPOSIUM
on



Synergy in Plant Science and Sustainable Future - 2023

Organized By

Department of Botany, Sant Gadge Baba Amravati University, Amravati

CERTIFICATE

This is to certify that Prof. / Dr. / Mr. / Ms. Ashwini B. Phokmare
presented ORAL / POSTER presentation in the Scientific Section VII
paper entitled Spectral Estimation - Photosynthetic Efficiency

in the XLVI All India Botanical Conference of the Indian Botanical Society and International Symposium on
'*Synergy in Plant Science and Sustainable Future - 2023*' held during November 04 - 06, 2023,
at Sant Gadge Baba Amravati University, Amravati.

Prof. Seshu Lavania
Secretary, IBS

Prof. N. K. Dubey
President, IBS

Prof. Varsha N. Nathar
Organizing Secretary

The Oxidative Cyclisation Of 2'-Hydroxychalcones To Aurones : A Review Article

G. B. Ingle, P. A. Gotmare, Dr. S.V. Kolhe

Department of Chemistry,
Shri Shivaji Arts, Commerce and Science College
Akot-441101, (Maharashtra), India
(Affiliated To Sant Gadge Baba Amravati University, Amravati)
Email: gajananpatilingle@yahoo.com

Abstract: Aurones constitute a subclass of naturally occurring compounds which are structurally isomeric to flavones, biogenetically related to chalcones, and are responsible for imparting beautiful yellow colors to some of the flower petals [1-4]. Recent investigations have shown that these compounds have potent and promising biological activities, in some cases even more potent than chalcones and flavones [5-7].

In this review, we report the recent advances made on the synthetic routes towards aurones. We also highlight characterization and physical properties with experimental data finally, some aspects regarding the possible development of aurones will be discussed briefly.

Keywords: Aurone, Density, Viscosity, Conductance, Physico-chemical etc.

INTRODUCTION:

The first examples of aurones were characterized in 1940 in Asteraceae [8], the family of sunflowers, which synthesize the most common 4-deoxy-derivatives of the family including sulfuretin, maritimetin, leptosidin and their corresponding glycosides. The species *variabilis* and *sulphureus* mainly express sulfuretin and its glycosylated counterparts in leaves and petals. In the *bidens* species, maritimetin has been isolated while, in the genus *Coreopsis*, compounds such as sulfuretin, maritimetin, but also leptosidin may be found.

In the early twentieth century, Gustav Klein coined the term anthochlor (anthos = flower, chl⁻orós = yellowish) to define a class of water-soluble pigments conferring color to plants able to synthesize them as secondary metabolites [9]. It included a restricted group of derivatives known as aurones (aurum = gold), due to the bright yellow/gold color that these compounds give to plants in which they are located. Aurone provides intense yellow pigmentation to some fruits and flowers [10]. However, they are also found in leaves, barks, seeds and woods of various plants. Aurone derivatives also shows various range of pharmacological activities such as antiviral, antifungal, antioxidant, anticarcinogen, antidiabetes [11,12]. Actually, to date, the chemical structures of more than 100 different aurones have been identified, characterized by distinctive hydroxylated, methoxylated, and glycosylated substitution patterns. Moreover, their effective potential to predict viable

therapeutic uses has begun to be unveiled [13-16]. Therefore, they represent a worth deepening class of natural compounds intended to provide bioactive compounds in the near future. The oxidative cyclisation reactions of chalcones to corresponding aurones and flavones are discussed. While Hg²⁺ mediated oxidative cyclisation of chalcones selectively give aurones, the general mechanisms of these oxidative cyclisation reactions are proposed [17].

Aurones have been reported to possess insect antifeedant activity, [18] anticancer, [19,20] antileishmanial [18,20] and antibacterial properties, [21] inhibitory activity against a variety of enzymes and proteins [22-28] and have been developed as potential amyloid imaging agents. [29]. Surprisingly, only few studies on the antioxidant activity of aurones exist, however these prove their potential as antioxidant agents [30].

2. EXPERIMENTAL STUDIES:

2.1 SYNTHESIS: Substituted Aurone have been synthesized by cyclization of substituted chalcone in presence of cyclizing agent Mercury Acetate and DMF solvent. Their general structures were confirmed by IR, ¹H NMR and mass spectral data. Table 1, Table 2, and Table 3 shows the various physical parameters of new synthesized Aurone.



2.2 PHYSICOCHEMICAL STUDIES: (DENSITY, VISCOSITY, CONDUCTANCE ETC.)

The synthesized Aurone was recrystallized from DMF and DMSO. The solvent A i.e. DMF and B, i.e. DMSO were used for the physicochemical studies. Solutions of different concentrations were made in solvent A and solvent B of the synthesized compounds. The conductance of solutions was measured using conductivity meter at various temperatures. Vis spectrophotometer was used to determine the absorbance of all the solutions. Table 1 shows the absorbance of synthesized Aurone at various temperatures and various concentrations.

3. RESULTS AND DISCUSSIONS:

3.1 SPECTRAL DATA :

IR(KBr cm^{-1}) 1700.03 (C=O cyclic), 1641.06 (C=C Unsaturated with ketone), 1466.11 (C=C aromatic), 1199.42 (C-O furane), 621.65 (C-Cl aromatic).

ES-MS [M+S] + Calculated for $\text{C}_{15}\text{H}_9\text{ClO}_2$: m/z was found 258.05, 261.06.

$^1\text{H-NMR}$ (500 MHz,DMSO) $^1\text{H NMR}$: δ 7.15 (1H, ddd, $J=8.1, 1.2, 0.5$ Hz) 7.28-7.51 (2H, 7.35 (ddd, $J=8.2, 7.8, 1.3$ Hz) 7.35(s)), 4.49-7.82 (6H, 7.59 (ddd, $J=8.4, 1.4, 0.5$ Hz), 7.58(ddd, $J=8.2, 1.5, 0.5$ Hz, 7.69 (ddd, $J=8.5, 1.7, 0.5$ Hz), 7.74(ddd, $J=8.6, 7.9, 1.5$ Hz)).

3.2 DENSITY AND VISCOSITY OF SYNTHESIZED AURONE:

Table 1: The table below shows density (ρ), and viscosity (η), at different concentrations and at 308.15K.

Conc.	Solvent A Density(ρ) (g cm^{-3})	Solvent A Viscosity ($\eta, 10^{-3}$) poise	Solvent B Density(ρ) (g cm^{-3})	Solvent B Viscosity ($\eta, 10^{-3}$) poise
0.05	0.967	6.9751	1.023	11.245
0.04	0.965	6.7645	1.011	11.210
0.03	0.964	6.6787	1.002	11.113
0.02	0.963	6.5939	0.997	11.047
0.01	0.962	6.5756	0.991	10.958

3.3 CONDUCTANCE: The table below shows values of conductance of various concentrations of solution at 308.15 K.

Concentrations	Conductance (S cm^{-3}) Solvent A	Conductance (S cm^{-3}) Solvent B
0.005	0.073	0.175
0.004	0.064	0.149
0.003	0.051	0.134
0.002	0.042	0.121
0.001	0.031	0.112

The above data clears the variation of conductance with concentration for both the solvents. It is observed that conductance increases with concentration and values are less in Solvent A than that in Solvent B i.e. there is linear increase in conductance with concentration.

4. CONCLUSIONS:

From above experimental values it is concluded that densities, viscosities and conductance and absorbance of solution are changes by changing temperatures and by changing the solvent due to solute-solvent interaction.

5. ACKNOWLEDGMENTS

The authors express their deep sense of gratitude to Principal Dr. S. H. Pande for providing the laboratory to carry out this research work. The authors are also thankful to SAIF, Punjab University for providing spectral data.

6. REFERENCES :

- [1] T. Nakayama, T. Sato, Y. Fukui, K. Y. Sakakibara, H. Hayashi, Y. Tanaka, T. Kusumi, Nishino, T. *FEBS Lett.* 499, 107–111, 2001.
- [2] A. C. Jain, V. K. Rohatagi, T. R. Seshadri, *Indian J. Chem.* 7, 540–543, 1969.
- [3] T. Nakayama, *J. Biosci. Bioeng.* 94, 487–491, 2002.
- [4] J. M. Olsen, N. Ronsted, U. Tolderlund, C. Cornett, P. Molgaard, J. Madsen, C. G. Jones, C. E. Olsen, *Nature*, 393, 529, 1998.
- [5] S. Okombi, D. Rival, S. Bonnet, A. M. Mariotte, E. Perrier, A. J. Boumendjel, *Med. Chem.* 49, 329–333, 2006.
- [6] R. Haudecoeur, A. Boumendjel, *Curr. Med. Chem.* 19, 2861–2875, 2012.
- [7] K. Manjulatha, S. Srinivas, N. Mulakayala, D. Rambabu, M. Prabhakar, K. M. Arunasree, M. Alvala, M. V. B. Rao, M. Pal, *Bioorg. Med. Chem. Lett.* 22, 6160–6165, 2012.
- [8] I. A. Geissman, C. D. Heaton, *Anthochlor pigments. IV. The pigments of Coreopsis grandiflora*, *Nutt. J. Am. Chem. Soc.*, 65, 677–683, 1943.
- [9] G. Klein, *Studien über das Anthochlor*, *Sitzb. Akad. Wiss. Wien*, 129, 341–395, 1920.
- [10] S. V. Jagtap, A. A. Khan, *Synthesis and biological activities of aurones: A Review*, *Int. J. Pure App. Biosci.* 4 (2) 137–155, 2016.
- [11] G. Sui, T. Zhang, B. Li, R. Wang, H. Hao, W. Zhou, *Recent advances on synthesis and biological activities of aurones*, *Bioorg. Med. Chem.* 29, 115895, 2021.
- [12] R. Bandichhor, *Hazardous Reagent Substitution: A Pharmaceutical Perspective*, *Green Chemistry Series* 52, 2018.
- [13] C. Zwegler, F. Gaascht, S. Valente, M. Diederich, D. Bagrel, G. Kirsch, *Aurones: Interesting natural and synthetic compounds with emerging biological potential*, *Nat. Prod. Commun.* 7, 389–394, 2012.
- [14] B. Boucherle, M. Peuchmaur, A. Boumendjel, R. Haudecoeur, *Occurrences, biosynthesis and properties of aurones as high-end evolutionary products*, *Phytochemistry*, 142, 92–111, 2017.
- [15] A. Alsayari, A. B. Muhsinah, M. Z. Hassan, M. J. Ahsan, J. A. Alshehri, N. Begum, *Aurone: A biologically attractive scaffold as anticancer agent*, *Eur. J. Med. Chem.*, 166, 417–431, 2019.
- [16] G. Sui, T. Li, B. Zhang, R. Wang, H. Hao, W. Zhou, *Recent advances on synthesis and biological activities of aurones*, *Bioorg. Med. Chem.* 29, 115895–115917, 2021.
- [17] M. Morimoto, H. Fukumoto, T. Nozoe, A. Hagiwara, K. J. Komai, *Agric. Food Chem.* 2007, 55, 700.
- [18] N. J. Lawrence, D. Rennison, A. T. McGown, J. A. Hadfield, *Bioorg. Med. Chem. Lett.* 2003, 13, 3759.
- [19] W. Huang, M.-Z. Liu, Y. Li, Y. Tan, G.-F. Yang, *Bioorg. Med. Chem.* 2007, 15, 5191.
- [20] O. Kayser, A. E. Kiderlen, *J. Tokai Exp. Clin. Med.* 1999, 23, 423.
- [21] N. Hadj-esfandiari, L. Navidpour, H. Shadnia, M. Amini, N. Samadi, M. A. Faramarzid, A. Shafiee, *Bioorg. Med. Chem.* 2007, 17, 6354.
- [22] A. Boumendjel, C. Beney, N. Deka, A.-M. Mariotte, M. A. t. Lawson, D. Tromprier, H. Baubichon-Cortay, A. Di Pietro, *Chem. Pharm. Bull.* 2002, 50, 854.
- [23] J. Schoepfer, H. Fretz, B. Chaudhuri, L. Muller, E. Seeber, L. Meijer, O. Lozach, E. Vangrevelinghe, P. J. Furet, *Med. Chem.* 2002, 45, 1741.
- [24] M. G. Thomas, C. Lawson, N. M. Allanson, B. W. Leslie, J. R. Bottomley, A. McBride, O. A. Olutanya, *Bioorg. Med. Chem. Lett.* 2003, 3, 423.
- [25] S. Okombi, D. Rival, S. Bonnet, A.-M. Mariotte, E. Perrier, A. J. Boumendjel, *Med. Chem.* 2006, 49, 329.
- [26] A.-I. Liu, H.-D. Wang, S. M. Lee, Y.-T. Wang, G.-H. Du, *Bioorg. Med. Chem.* 2008, 16, 7141.
- [27] R. Sheng, Y. Xu, C. Hu, J. Zhang, X. Lin, J. Li, B. Yang, Q. He, Y. Hu, *Eur. J. Med. Chem.* 2009, 44, 7.
- [28] M. Ono, Y. Maya, M. Haratake, K. Ito, H. Mori, M. Nakayama, *Biochem. Biophys. Res. Commun.* 2007, 361, 116.
- [29] S. Venkateswarlu, G. K. Panchagnula, G. V. Subbaraju, *Biosci. Biotechnol. Biochem.* 2004, 68, 2183.
- [30] S. Venkateswarlu, G. K. Panchagnula, A. L. Gottumukkala, G. V. Subbaraju, *Tetrahedron* 2007, 63, 6969.

●●●

Design Of An Atom Efficient Aurone Derivative And Evaluated Physico - Chemical Parameters

¹ P.A.Gotmare, ² G.B. Ingle, ³ Dr. S.V Kolhe

Department of Chemistry,
Shri Shivaji Arts, Commerce and Science College,
Akot, Dist.Akola-444101, (Maharashtra), India
e-mail:prashantpatilchem2763@gmail.com

ABSTRACT

In this study, we have synthesized aurones derivatives by cyclizing of chalcone in presence of mercuric acetate and DMF as a solvent. Its physico-chemical parameters like viscosity, density refractive index, and ultrasonic velocity are evaluated. To check the purity of resultant aurones by TLC and Characterization by using IR, H-NMR and mass Spectrometer.

Key word: Aurons, viscosity, density, ultrasonic velocity etc.

1. INTRODUCTION

Aurones, are a subclass of naturally occurring compounds which are structurally isomeric to flavones, biogenetically related to chalcones, and are responsible for imparting beautiful colors to some of the flower petals [1-4]. Recent investigations have shown that these compounds have promising biological activities, in some cases even more potent than chalcones and flavones [5-7].

Aurones are mainly synthesized from chalcones in plants by oxidation, cyclization and rearrangement with the help of an enzyme aureusidin synthase [8-10]. The aurones shows most of the biological activity like anticancer [11-13] antimicrobial, [14] and antioxidant [15] properties whereas they possess enzyme inhibitory [16, 17], or enzyme-inducing activity [18]. insect anti-feedant[19],herbicidal[20], anti-HIV[21,22], anti-HCV (hepatitis C virus)[23,24], anti-malarial[25,26], ChE inhibitory[27,28], MAO inhibitory[29] activities in the specified studies. The antileishmanial activity of a series of aurones was first reported by Kayser and Kiderlen in 1999 [30].

Physico-chemical properties are useful to design of new pesticides and drugs. Hence in present work synthesized aurones and derive its physico-chemical properties.

2. EXPERIMENTAL:

The auron derivative mainly prepared from chalcones, and the pre material to prepared chalcone is aromatic benzaldehyde and 2-hydroxy acetophenone. The aurones prepared by cyclization of chalcones in

presence of best cyclizing agent mercury acetate with solvent DMF. The resultant aurone crystallized by using alcohol and purity check by TLC. The characterization done by using spectroscopic technique like IR spectra were recorded in KBr by using FT-IR(IR Perkin Elmer - Spectrum RX-IFTIR).Mass spectra were recorded on mass spectrometer while ¹HNMR were recorded on FT NMR Spectrometer (Bruker Avance Neo 500 MHz).

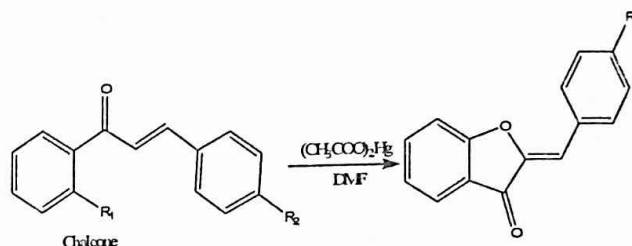


Table: 1

Compound	R ₁	R ₂	Molecular formula	Molecular weight	Yield
Aurones	OH	Cl	C ₁₅ H ₉ ClO ₂	256.5	82%

SPECTRAL DATA :

IR (KBr cm⁻¹) 1710 (C=O cyclic), 1616.64(C=C Unsaturated with kotone), 1459 (C=C aromatic), 1210(C-O furane), 621.60 (C-Cl aromatic), **¹H-NMR (500 MHz, DMSO)** ¹H NMR: δ 7.12 (1H, ddd, J = 8.1, 1.2, 0.5 Hz), 7.27-7.41 (2H, 7.34 (ddd, J = 8.0, 7.6, 1.2 Hz), 7.33 (s)), 7.46-7.77 (6H, 7.52 (ddd, J = 8.2, 1.3, 0.5 Hz), 7.54 (ddd, J = 8.0, 1.4, 0.5 Hz), 7.64 (ddd, J = 8.2, 1.5, 0.5 Hz), 7.70 (ddd, J = 8.1, 7.6, 1.4 Hz)). **ES-MS [M+H]⁺**

Calculated for C₁₅H₉ClO₂: *m/z* was found 257.03, 259.03, 260.04

3. PHYSICO-CHEMICAL PROPERTIES

Physicochemical properties play an important role in modifying the biological activities of many compounds. Thus, pharmacological or therapeutic effects of a drug also relate to its bio distributions or physicochemical parameters. The physicochemical properties of interest to chemical alternatives assessment can be used to identify physical hazards and to understand or predict a chemical's environmental fate, human toxicity.

3.1 Density and Viscosity

Density is a measurement of how much space or volume is packed in an object or substance. So, how does density impact every aspect of our lives? Viscosity directly impact on flow of liquid. The density measured by using pycnometer while viscosity by using Ostwald viscometer by following formula

$$\eta_y = \eta_w \frac{d_y \times d_y}{d_w \times d_w}$$

3.2 Ultrasonic velocity:

The ultrasonic velocity is calculated as the frequency of the ultrasonic waves and measured wavelength value of ultrasonic waves in a given solution. The viscosity of the solution is calculated using density and time flow of liquid. Ultrasonic studies provide a wealth of information in understanding the molecular behavior and intermolecular interaction. The ultrasonic velocity is calculated as

$$V = f \lambda$$

where "f" is the frequency of the ultrasonic waves and "λ" is the measured wavelength value of ultrasonic waves in a given solution..

3.3 Refractive index:

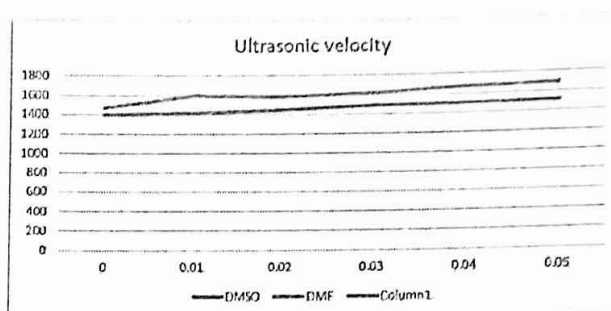
Refractive index is a fundamental constant that describes the interaction between light and material. Abbe refractometer is useful to determine refractive index of aurone in different solvent. The uncertainty of temperature was ± 0.10C and that of refractive index was 0.0005 respectively.

4. RESULTS AND DISCUSSION:

Density, Viscosity and ultrasonic velocity of aurones derivative at 25° C. in different solvent and at different concentration.

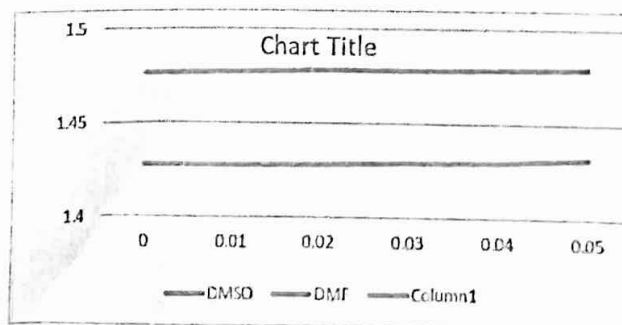
Table: 2

Cone. (M).	DMSO Solvent			DMF Solvent		
	Density (ρ)(kg/m ³)	Viscosity (η.10 ⁻¹) NSM ⁻¹	Viscosity m/s	Density (ρ)(kg/m ³)	Viscosity (η) × 10 ⁻¹ NSM ⁻¹	Velocity m/s
0.00	1112.46	1.45428	1466.74	957.628	0.70773	1402.71
0.01	1115.52	1.52140	1593.78	962.852	0.78865	1418.64
0.02	1116.62	1.63562	1588.24	964.507	0.79076	1446.52
0.03	1117.02	1.6925	1620.72	965.574	0.80142	1436.73
0.04	1119.64	1.7271	1672.46	967.042	0.82874	1497.68
0.05	1120.31	1.8074	1690.76	967.945	0.83823	1508.44



Ultrasonic velocity increases by increasing concentration which indicate the solute solvent interaction. It shows that the density, viscosity, and ultrasonic velocity of the solution increase with increase in concentration. This linear increase of ρ, η, and v, with concentration confirms an increase of cohesive forces because of strong molecular interactions. Ultrasonic waves are present in the solution, the molecules get perturbed. Due to some elasticity of the medium, perturbed molecules regain their equilibrium positions.

Refractive index also depends on concentration. If concentration increases which slightly increase the refractive index, it shows the great interaction between solute and solvents molecules.



Conc. (M)	DMSO R.I.	DMF R.I.
0.00	1.4768	1.4274
0.01	1.4772	1.4276
0.02	1.4781	1.4282
0.03	1.4784	1.4290
0.04	1.4789	1.4295
0.05	1.4792	1.4320

5. CONCLUSION:

In this work, the synthesis of aurone derivative and check the physico-chemical properties. It is concluded that, physicochemical properties of a compound depends on nature of solvent and concentration. Acoustic parameter was determine interaction between solute and solvent molecules in various concentrations.

ACKNOWLEDGMENTS

The authors express their deep sense of gratitude to Principal Dr. Pande sir for providing the laboratory to carry out this research work. The authors are also thankful to SAIF Punjab University for providing spectral data. Authors also thankful Family members for valuable support.

REFERENCES

- [1] Nakayama, T.; Sato, T.; Fukui, Y.; Sakakibara, K.Y.; Hayashi, H.; Tanaka, Y.; Kusumi, T.; Nishino, T. *FEBS Lett.* 499 (2001) 107–111.
- [2] Jain, A.C.; Rohatagi, V.K.; Seshadri, T.R. *Indian J. Chem.* 1969, 7, 540–543.
- [3] Nakayama, T. *J. Biosci. Bioeng.* 94 (2002) 487–491.
- [4] Olesen, J.M.; Ronsted, N.; Tolderlund, U.; Cornett, C.; Molgaard, P.; Madsen, J.; Jones, C.G.; Olsen, C.E. *mNature.* 393 (1998) 529.
- [5] Okombi, S.; Rival, D.; Bonnet, S.; Mariotte, A.M.; Perrier, E.; Boumendjel, A. *J. Med. Chem.* 49 (2006) 329–333.
- [6] Haudecoeur, R.; Boumendjel, A. *Curr. Med. Chem.* 19 (2012) 2861–2875.
- [7] Manjulatha, K.; Srinivas, S.; Mulakayala, N.; Rambabu, D.; Prabhakar, M.; Arunasree, K.M.; Alvala, M.; Rao, M.V.B.; Pal, M. *Bioorg. Med. Chem. Lett.* 22 (2012) 6160–6165.
- [8] Nakayama T., Enzymology of aurone biosynthesis, *Journal of Bioscience and Bioengineering.* 94(6) (2002) 487–491.
- [9] Nakayama T., Sato T., Fukui Y., Yonekura K., Sakakibara, Hayashi H., Tanaka Y., Kusumi T., Nishino T., Specificity analysis and mechanism of aurone synthesis catalyzed by aureusidin synthase, a polyphenol oxidase homolog responsible for flower coloration, *FEBS Letters* 499(1-2) (2001) 107-111
- [10] Nakayama T., Yonekura K., Sakakibara, Sato T., Kikuchi S., Fukui Y., Fukuchi-Mizutani M., Ueda T., Nakao M., Tanaka Y., Kusumi T., Nishino T., Aureusidin synthase: A polyphenol oxidase homolog responsible for flower coloration, *Science.* 290 (2000) 1163- 1166.
- [11] Cheng H., Zhang L., Liu Y. et al., "Design, synthesis and discovery of 5-hydroxyaurone derivatives as growth inhibitors against HUVEC and some cancer cell lines," *European Journal of Medicinal Chemistry.* vol. 45, no. 12 (2010) pp. 5950–5957.
- [12] Sim H. M., Lee C. Y., Ec P. L. R., and Go M. L., "Dimethoxyaurones: potent inhibitors of ABCG2 (breast cancer resistance protein)," *European Journal of Pharmaceutical Sciences.* vol. 35, no. 4 (2008) pp. 293–306.
- [13] Sim H. M., Loh K. Y., Yeo W. K., Lee C. Y., and Go M. L., "Aurones as modulators of ABCG2 and ABCB1: synthesis and structure - activity relationships," *ChemMedChem.* vol. 6, no. 4, pp. (2011) 713–724.
- [14] Bandgar B. P., Patil S. A., Korbadi B. L., Biradar S. C., Nile S. N., and Khobragade C. N., "Synthesis and biological evaluation of a novel series of 2,2-bisaminomethylated aurone analogues as anti-inflammatory and antimicrobial agents," *European Journal of Medicinal Chemistry.* vol. 45, no. 7 (2010) pp. 3223–3227.
- [15] Venkateswarlu S., Panchagnula G. K., Gottumukkala A. L., and Subbaraju G. V., "Synthesis, structural revision, and biological activities of 4_-chloroaurone, a metabolite of marine brown alga *Spatoglossum variabile*," *Tetrahedron.* vol. 63, no. 29 (2007) pp. 6909–6914.
- [16] Detsi A., Majdalani M., Kontogiorgis C. A., Hadjipavlou D - Litina, and Kefalas P., "Natural and synthetic 2_-hydroxychalcones and aurones: synthesis, characterization and evaluation of the antioxidant and soybean lipooxygenase inhibitory activity," *Bioorganic and Medicinal Chemistry.* vol. 17, no. 23 (2009) pp. 8073–8085.
- [17] Haudecoeur R., Ahmed-Belkacem A., W. Yi et al., "Discovery of naturally occurring aurones that are potent allosteric inhibitors of hepatitis C virus RNA-dependent RNA polymerase," *Journal of Medicinal Chemistry.* vol. 54, no. 15 (2011) pp. 5395–5402.
- [18] Lee C. Y., Chew E. H., and Go M. L., "Functionalized aurones as inducers of NAD(P)H:quinone oxidoreductase 1 that activate AhR/XRE and Nrf2/ARE signaling pathways: synthesis, evaluation and SAR," *European Journal of Medicinal Chemistry.* vol.45, no. 7 (2010) pp. 2957–2971.

- [19] Morimoto M, Fukumoto H, Nozoe T, et al. Synthesis and insect antifeedant activity of aurones against *spodoptera litura* larvae. *J Agric Food Chem*. 55 (2007) 700–5.
- [20] Zhang M, Xu XH, Cui Y, et al. Synthesis and herbicidal potential of substituted aurones. *Pest Manag Sci*. 68 (2012) 1512–22.
- [21] Gao X, Yang L, Shu L, et al. Aurone constituents from the flowers of *rosa rugosa* and their biological activities. *Heterocycles*. 85 (2012) 1925–31.
- [22] Gao X-M, Yang L-Y, Huang X-Z, et al. Aurones and isoaurones from the flowers of *rosa damascena* and their biological activities. *Heterocycles*. 87 (2013) 583–9.
- [23] Meguellati A, Ahmed Belkacem A, Yi W, et al. B-ring modified aurones as promising allosteric inhibitors of hepatitis C virus RNA-dependent RNA polymerase. *Eur Med Chem*. 80 (2014) 579–92.
- [24] Haudecoeur R, Ahmed Belkacem A, Yi W, et al. Discovery of naturally occurring aurones that are potent allosteric inhibitors of hepatitis C virus RNA-dependent RNA polymerase. *J Med Chem*. 54 (2011) 5395–402.
- [25] Gupta AK, Singh P, Sabarwal N. Rationalization of molecular descriptors of aurone analogs toward antimalarial activity. *Asian J Pharm Clin Res*. 7 (2014) 186–92.
- [26] Carrasco MP, Newton AS, Gonçalves L, et al. Probing the aurone scaffold against *Plasmodium falciparum*: design, synthesis and antimalarial activity. *Eur J Med Chem*. 80 (2014) 523–34.
- [27] Di Giovanni S, Borloz A, Urbain A, et al. In vitro screening assays to identify natural or synthetic acetylcholinesterase inhibitors: thin layer chromatography versus microplate methods. *Eur J Pharm Sci*. 33 (2008) 109–19.
- [28] Sheng R, Xu Y, Hu C, et al. Design, synthesis and AChE inhibitory activity of indanone and aurone derivatives. *Eur J Med Chem*. 44 (2009) 7–17.
- [29] Geldenhuys WJ, Funk MO, Van der Schyf CJ, Carroll RT. A scaffold hopping approach to identify novel monoamine oxidase inhibitors. *Bioorg Med Chem Lett*. 22 (2012) 1380–3.
- [30] Kayser O. and Kiderlen A. F., "Leishmanicidal activity of aurones," *Tokai Journal of Experimental and Clinical Medicine*. vol. 23, no. 6 (1998) pp. 423–426.

Shri Shivaji Arts, Commerce and Science College, Akot

Report

Research Paper UGC Care List

Department of Economics



UGC CARE LISTED
ISSN No. 2394-5990

इतिहासाचार्य वि. का. राजवाडे मंडळ, धुळे
या संस्थेचे त्रैमासिक
॥ संशोधक ॥

पुरवणी अंक २ – सप्टेंबर २०२३ (त्रैमासिक)

- शके १९४५
- वर्ष : ९१
- पुरवणी अंक : २

संपादक मंडळ

- प्राचार्य डॉ. सर्जेराव भामरे
- प्रा. डॉ. मृदुला वर्मा
- प्रा. श्रीपाद नांदेडकर

* प्रकाशक *

श्री. संजय मुंदडा

कार्याध्यक्ष, इ. वि. का. राजवाडे संशोधन मंडळ, धुळे ४२४००१

दूरध्वनी (०२५६२) २३३८४८, ९४०४५७७०२०

कार्यालयीन वेळ

सकाळी ९.३० ते १.००, सायंकाळी ४.३० ते ८.०० (रविवारी सुट्टी)

मूल्य रु. १००/-

वार्षिक वर्गणी रु. ५००/-, आजीव वर्गणी रु. ५०००/- (१४ वर्षे)

विशेष सूचना : संशोधक त्रैमासिकाची वर्गणी चेक/ड्राफ्टने
'संशोधक त्रैमासिक राजवाडे मंडळ, धुळे' या नावाने पाठवावी.

अक्षरजुळणी : सौ. सीमा शिंदे, वारजे-माळवाडी, पुणे ५८.

महाराष्ट्र राज्य साहित्य आणि संस्कृती मंडळाने या नियतकालिकेच्या प्रकाशनार्थ अनुदान दिले आहे. या नियतकालिकेतील लेखकांच्या विचारांशी मंडळ व शासन सहमत असेलच असे नाही.



भारतातील महिला सक्षमीकरणात सामाजिक व आर्थिक स्थितीचे योगदान

डॉ. एम. के. नन्नावरे

सहयोगी प्राध्यापक व अर्थशास्त्र विभाग प्रमुख,
श्री शिवाजी कला, वाणिज्य व विज्ञान महाविद्यालय, आकोट
जि. अकोला (महाराष्ट्र)

सारांश :

महिला सक्षमीकरण ही एक क्रमिक प्रक्रिया आहे. महिलांच्या सामाजिक आणि आर्थिक सक्षमीकरणाचा संबंध बहुतेक वेळा श्रमशक्ती आणि उत्पन्नाशी संबंधित असतो. तथापि, रोजगार आणि उत्पन्नाच्या वाढीवतेमुळे महिलांची सामाजिक, आर्थिक स्थिती आणि निर्णय घेण्याच्या सामर्थ्यात सुधारणा होत नाही. सामाजिक, सांस्कृतिक, शैक्षणिक, आर्थिक आणि राजकीय अशा विविध घटकांना काही G-20 देशांमध्ये सतत लिंग तफावतीसाठी जबाबदार असल्याचे म्हटले जाते. भारतातील महिलांची स्थिती आजही शिक्षण, आरोग्य, रोजगार, निर्णय क्षमतेतील प्रमाण आणि वित्तीय साक्षरता पुरुषांच्या तुलनेत कमी दिसून येते.

बीजशब्द : महिलांची स्थिती, शिक्षण, आरोग्य, रोजगार, निर्णय क्षमतेतील प्रमाण

प्रस्तावना :

सक्षमीकरण ही एक बहुआयामी संकल्पना असून ती लोकांचा सामाजिक विकास तसेच आर्थिक व राजकीय क्षेत्रातील सहभागाशी निगडित आहे. आर्थिक अभिवृद्धी आणि विकास यांना गती देण्यासाठी महिला सक्षमीकरणाच्या प्रक्रियेला १९७५ मध्ये चालना मिळाली. सबलीकरण म्हणजे स्त्रियांचे पोषण करणे, त्यांना स्वातंत्र्य देणे आणि त्यांचे दारिद्र्य दूर करणे होय. स्त्री सक्षमीकरणाचा शब्दशः अर्थ स्त्रियांना पुरुषांच्या बरोबरीने समान विकासाची संधी देणे होय. सक्षमीकरण म्हणजेच दुर्बलता नष्ट करणारी संकल्पना. महिला सक्षमीकरणाचे मोजमाप करण्यासाठी व्यापक स्तरावर अवलंबीलेल्या संकल्पनात्मक-लिंग-निगडीत विकास निर्देशांक, लिंग-आधारीत मानव विकास निर्देशांक आणि लिंग-आधारीत सक्षमीकरण मोजमाप असे काही घटक संयुक्त राष्ट्र विकास कार्यक्रमाने (१९९५) निश्चित केले आहेत आणि सर्वसामान्यपणे याच घटकांचा परिमाण म्हणून वापर केला जात आहे.

पुस्तकी अंक २ - सप्टेंबर २०२३

जागतिक व भारतसंशोधन साहित्याचा आढावा :

संयुक्त राष्ट्र संघटनेने १९७५ हे वर्ष आंतरराष्ट्रीय महिला वर्ष म्हणून घोषित केले. त्यानंतर बीजिंग येथील चौथ्या (१९९५) जागतिक महिला परिषदेत जगभरातील महिला सक्षमीकरणासाठी नवीन दृष्टी देणाऱ्या एका नव्या पर्वाची सुरुवात झाली. महिला सबलीकरणासाठी १९७५ ते १९८५ पर्यंत महिला विकासाचे दशक म्हणून युनोने जाहीर केले. २०१५ मध्ये तुर्की अध्यक्षपदाच्या काळात महिला आर्थिक सक्षमीकरणाला अधिक चालना देण्याच्या उद्देशाने महिला २० (W20) हा एक महत्वाचा गट स्थापन करण्यात आला. W20 आणि We-Fi (Women Entrepreneur-Finance Initiative महिला उद्योजक-वित्तीय पुढाकार) हे सर्वात महत्वाचे उपक्रम आहेत. ज्याने महिला सक्षमीकरणासाठी सक्षम वातावरण प्रदान केले आहे. W20 ही महिला-पुरुष समानतेवर समन्वय साधण्यासाठी एक महत्वाची यंत्रणा आहे. भारतात राष्ट्रीय महिला आयोग कायद्यान्वये (१९९०) महिलांचे हितसंरक्षण करण्याच्या हेतूने ३१ जानेवारी, १९९२ रोजी राष्ट्रीय महिला आयोगाची स्थापना करण्यात आली. भारताने १२ डिसेंबर, २०२२ रोजी थ२० अध्यक्षपदाची सूत्रे स्वीकारल्यानंतर, 'महिला-नेतृत्व व विकास' या माध्यमातून समन्याय (Equity) आणि समानतेचे (Equality) जग निर्माण करण्याचा दृष्टिकोन प्रत्यक्षात आणण्यावर लक्ष केंद्रीत केले आहे. भारताच्या अध्यक्षतेखाली W20 ची पाच प्राधान्य क्षेत्रे-उद्योजकतेतील महिला, तळागाळातील महिला नेतृत्व, लिंग डिजिटल विभाजन, शिक्षण आणि कौशल्य विकास आणि हवामान बदल, कृतीतील सहभाग यांचा समावेश आहे.

संशोधन पद्धती :

शोधनिबंध हा गुणात्मक, संख्यात्मक पद्धती व दुय्यम आधारसामग्रीवर आधारित आहे. भारतातील पुरुष आणि महिलांवरील अहवाल आणि mospi या संकेतस्थळावरील



देऊन इरोजगाराभिमुख बनविण्यासाठी स्त्री शिक्षण हा महिला सबलीकरणाचा प्रभावी उपाय ठरेल.

संदर्भ :

- १) Kishor and Gupta, (2004), "Women's Empowerment in India and Its States-Evidence from the NFHS", Economic and Political Weekly, Vol.39.
- २) Pratisha Padmasri Deka (2015), "Financial literacy and financial inclusion for women empowerment: A study", International Journal of Applied Research Vol.1 (9).
- ३) The Ministry for Women and Child Development (2015), High Level Committee Report on the status of Women.

- ४) Athreya, Venkatesh B., Chunkanth and Sheela Rani (1996), Literacy and Empowerment, Sage Publication.
- ५) The Ministry of Health and Family Welfare (2016), National Family Health Survey (NFHS-4) 2015-16.
- ६) United Nations Development Programme (2020), Human Development Report 2020.
- ७) बोरसे संगीता (२०२२), मकौटुं विक वित्तीय व्यवस्थापनात महिलांची भूमिका- पुणे शहराच्या
- ८) संदर्भात, अप्रकाशित पीएच.डी. प्रबंध, एस.एन.डी.टी. महिला विद्यापीठ, मुंबई, जून २०२२.
- ९) जनगणना अहवाल- १९७१ ते २०११.
- १०) योजना मासिक, जून २०१२.



Research Paper



MULTI-DISCIPLINARY ONE DAY INTERNATIONAL E-CONFERENCE

On

WOMEN EMPOWERMENT : ROLE OF LAWS, SOCIETY, CULTURE, POLITICS, LITERATURE AND MEDIA

Organized by

IQAC, Dr. Babasaheb Ambedkar College of Arts, Commerce and Science, Bramhapuri, Dist. Chandrapur, Maharashtra, India - 441206

• CERTIFICATE •

This is to certify that Prof./Dr./Mr./Mrs./Ms. Dr. M.K. Nannaware of Shri Shiveji Arts, Commerce and Science college, Akot Dist. Akola (Maha.) has successfully participated in INTERNATIONAL E-CONFERENCE ON "WOMEN EMPOWERMENT : ROLE OF LAWS, SOCIETY, CULTURE, POLITICS, LITERATURE AND MEDIA" organized by IQAC, Dr. Babasaheb Ambedkar College of Arts, Commerce and Science, Bramhapuri, Dist. Chandrapur, Maharashtra, India on 17th August 2023.

She/He has Presented/Published Paper entitled भारतातील महिला सक्षमीकरण सांघाजिक व आर्थिक स्थितीचे योगदान

in the Conference / UGC Care Listed Journal / Peer Reviewed Journal.

Convener

Dr. Snigdha R. Kamble

Co-Convener

Dr. Dharmapal B. Fulzele

Principal

Dr. Devesh M. Kamble

Certificate

5th International Conference on Literature, Society & the Global Media

Date: 9 - 10 September, 2023

Conference Proceedings



Edited by

Dr. C. M. Patel

Jointly organized by :

Dept. of Media Studies – Jain (Deemed-to-be- University)
Research Culture Society
International Languages Council

Research Culture Society
www.researchculturesociety.org

5TH INTERNATIONAL CONFERENCE ON LITERATURE, SOCIETY & THE GLOBAL MEDIA

अंतर्राष्ट्रीय सम्मेलन : साहित्य, समाज और
वैश्विक मीडिया

(ICLSGM – 2023)

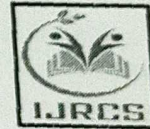
9 – 10 September, 2023

Conference Proceedings Issue / Special Issue

Edited by:

Dr. C. M. Patel

ISBN: 978-81-962039-8-6



Jointly Organized by :

The Department of Media Studies an integral part of CMS JAIN (Deemed-to-be University), Bangalore, India
International Languages Council
Research Culture Society

Published by:



Research Culture Society
www.researchculturesociety.org
(Reg. International ISBN Books Publisher)

Email: RCSPBOOKS@gmail.com

INDEX

PAPER ID	Table of Contents	Page No.
a)	About the organizing Institutions About the Conference Conference Objectives	5
b)	Conference Committee	6
c)	Table of Contents	7-8
	Paper/Article Title & Author Name	
ICLSGM001	Layers of Discord: A Marxist Analysis of Class and Ideology in Mahasweta Devi's Mother of 1084, from Domestic to Societal Arenas -- Gajanan Dayaramji Tayade	8-14
ICLSGM002	Ruth Bader Ginsburg: Adaptation from Biography to Film and its Relevance to the Society -- Mansi Gupta	15-19
ICLSGM003	Myth, Folklore and History in the plays of Girish Karnad -- Shabdita Kalyani, Dr. Arjun Kumar	20-25
ICLSGM004	A study on social, political conflicts in Manohar Malgonakar's "a bend in the Ganges" -- Nagarjuna Poorni	26-29
ICLSGM005	Role of Augmented Reality in changing school education paradigms -- Diksha Sharma, Dr. Rasna Sehrawat	30-35
ICLSGM006	Empowering Female Characters in Indian Media: Breaking Stereotypes, Sparking Conversations, and Fostering Change -- Pragya Lall	36-40
ICLSGM007	Language Change and Shift: A Bearer of Linguicide - The Indian Context -- Ms Lata Eknath Taral	41-47
ICLSGM008	Intervention Measures Taken by Adults to prevent youngsters from cyber-stalking : A study -- Dr. Lalita Minocha	48-52
ICLSGM009	The Vision of Consequences of Exploitation and Rooster Coop System in India through Aravind Adiga's The White Tiger -- Vijaya Rani. S, Dr.C. Susila	53-55
ICLSGM010	Ecological Concerns in Anita Desai's Cry, the Peacock -- Gagneet Pal Kaur	57-62
ICLSGM011	The impact of Culture on Learning a foreign Language: The Case of English Language in Morocco -- Houda Baoussidi	63-70
ICLSGM012	Inequality of power and patriarchal domination in Vijay Tendulkar 's play silence ! the court is in session -- Bibi Fatima	71-74
ICLSGM013	In the Age of Virtual Reality and Artificial Intelligence, a New Way of Thinking -- Anindita Sarker	75-80
ICLSGM014	Shaping Society: The Influential Role of Media and the Rise of Community Journalism -- B Gokula Krishnan , Dr. Bhargavi D Hemmige	81-89
ICLSGM015	Cyber Readiness of Police Personnel regarding new Modus Operandi of Cyber Criminals -- Dr. G.N. Sharma	90-97

ICLSGM016	Bhumiputra Biju Pattanaik-adventurous, freedom fighter and his contribution towards vocational and technical education for Orissa -- Dr. Sasmita Gahan, Dr. Dillip Kumar Nayak	98-103
ICLSGM017	Importance of Culture in teaching English language in present scenario -- P.Vijaya Kumar, M. Nagaraja Kumar,	104-108
ICLSGM018	Use of Social Media in Literature and Society -- Mr.Manik Ghosh	109-113
ICLSGM019	Eco Ethics in preserving environment: A critical study of Arundhati Roy's "The Ministry of Utmost Happiness" -- Prabha S., Dr. Rathna P.	114-118
ICLSGM020	Jurassic World Dominion: Hindi Dubbing (An Analysis of Language & Culture on Dubbing) -- Manisha Gupta	119-122
ICLSGM021	वैश्वीकरण के दौर में युवा और नयी कविता -- md Mazid Mia	123-125
ICLSGM022	वैश्वीकरण के दौर में बदलते साहित्यिक मूल्य -- डॉ. देवीलाल रोझ	126-130
ICLSGM023	दलित साहित्यिक आलोचना में दलित चेतना -- Bhoir Sunil Maruti	131-136
ICLSGM024	साहित्य पर आधारित फिल्मों का समाज पर प्रभाव -- Dr.Asha Bala	137-142
ICLSGM025	साहित्य और समाज का अन्तर्सम्बन्ध -- डॉ. सुनील दत्त	143-149
ICLSGM026	हिंदी सिने गीतों में मानवीय मूल्य -- डॉ निर्मला राजपूत	150-155
ICLSGM027	सोशल मीडिया एवं इलेक्ट्रॉनिक का शिक्षा पर प्रभाव -- प्रा.डॉ. सुरेखा प्रेमचंद मंत्री	156-159

Layers of Discord: A Marxist Analysis of Class and Ideology in Mahasweta Devi's *Mother of 1084*, from Domestic to Societal Arenas

Gajanan Dayaramji Tayade

Assistant Professor

Department of English

Shri Shivaji Arts, Commerce & Science College, Akot, Dist. Akola, Maharashtra.

Sant Gadge Baba Amravati University Amravati.

Email - tejtayade@gmail.com

At. Post. Donoda Khairi Ta. Achalpur,

Dist. Amravati. 444806

Abstract: The novel "Mother of 1084," originally titled "Hajar Chaurasi ki Ma" in Bengali holds a mirror to the class struggle prevailing between the bourgeois and the proletariat. Translated into English by Samik Bandyopadhyay, this dramatic work takes root against the backdrop of the Naxalite Movement in the 1970s. Central to the narrative is the expansion of the peasant revolution into a widespread mass uprising against the Neo-colonial bourgeois capitalist government, a spark ignited in Naxalbari, Darjeeling District of West Bengal in March 1967.

This research paper delves into the intricate layers of this pervasive class struggle, which reverberated as a mass revolution during that era, transcending boundaries from the intimate familial sphere to the broader social spectrum. Beyond the portrayal of class struggle and the clash of ideas, the paper unveils Mahasweta Devi's compassionate stance towards the Naxalites, whom she earnestly endeavoured to understand and embrace. From both social and political standpoints, Devi's humane perspective is scrutinized, intertwining literature and history to infuse realism into the tumultuous mass revolution of the 1970s. Through this blend, the paper seeks to shed light on the Naxalites, often deemed social adversaries, and present a plea for empathy and comprehension, intertwining the literary realm with the historical turbulence of the time.

Keywords: Class struggle, Bourgeois, Proletariat, Naxalite Movement, capitalist government.

The opening line of the renowned work "The Communist Manifesto," co-penned by Karl Marx and Frederick Engels, reverberates with an enduring truth: "The history of all societies that have existed up to the present is the history of class struggles" (Marx & Engels 473). This unchanging reality resides at the core of both current and bygone human societies. Despite the authors having passed away a century ago, their legacy persists, an everlasting continuum. The unending rhythm of this struggle has endured since the very inception of our civilization. Without fail, one segment of society finds itself preyed upon by an oppressive bourgeois faction, a cycle that culminates in the subjugation of one class into the state of the proletariat.

Oppressor and oppressed remained in perpetual antagonism, locked in an uninterrupted, sometimes concealed, sometimes overt clash – a clash that concluded either in the revolutionary reconstruction of the entire societal

framework or in the mutual downfall of the conflicting classes (Marx & Engels 474).

According to Marxism, human society consists of two distinct classes: the 'base' and the 'superstructure'. The 'superstructure', exemplified by the bourgeoisie, wields dominion over the 'base', symbolized by the proletariat – a class integral to all human production yet devoid of the autonomy to lead a self-directed life.

Translated into English by Samik Bandyopadhyay from its original Bengali version titled "*Hajar Chaurasir Ma*," the novel "*Mother of 1084*" endeavours to depict the class struggle between the bourgeoisie and the proletariat on the theatrical canvas, set against the backdrop of the 1970s Naxalite Movement. The expansion of the peasant revolution into a mass uprising against the Neo-colonial bourgeois capitalist government in Naxalbari of Darjeeling District, West Bengal, in March 1967 serves as the gripping backdrop for all the unfolding drama in the novel. In accordance with the principles of Marxist class struggle, the rebels sought to materialize their movement by establishing a new party, the CPI (ML), emerging from the CPI (M), and tracing the path laid down by Marxist leaders to supplant capitalism with socialism. This era marked a crisis when the middle class was rapidly losing equilibrium and shifting allegiances to the other class, while an arrogantly complacent and unenlightened affluent class was coming into existence (Bandyopadhyay viii-ix). This gave rise to two conflicting classes, entangled in a struggle.

As a conscientious writer attuned to society's pulse, Mahasweta Devi couldn't ignore the prevailing spirit of the time. She wielded her pen to respond to the era's demands, yielding the fruit that is "*Mother of 1084*." "After thirty-one years of independence, I find my people still groaning under hunger, landlessness, indebtedness, and bonded labour. An anger, luminous, burning, and passionate, directed against a system that has failed to liberate my people from these horrible constraints, is the only source of inspiration for all my writing" (Bandyopadhyay viii-ix). The triumph of this acclaimed novel doesn't merely stem from offering fragmentary insights into the revolution, but from unearthing the stark realities endured by the revolutionaries who faced inhumane torments at the hands of the law and the state machinery.

The essence of class struggle pervades the novel "*Mother of 1084*" from its very inception, persisting until its conclusion. A voice echoing the date "Seventeen January Nineteen Seventy" three times in opening part and the haunting sight of the police morgue strewn with the lifeless bodies of Brati and his comrades in the next part intricately tie the narrative to the Naxalite Movement of the 1970s. This movement saw numerous young lives lost in their endeavour to usher in societal transformation driven by the Marxian vision of a classless society. References to events such as the Barasat killing in November 1970 – where the bodies of eleven young men were discovered, hands bound, strewn on the road – and the Baranagar killing on 12 August 1971 – when over a hundred Naxalites were hunted down, beheaded, and publicly killed – establish a connection between the fate of Brati and his group and the systematic massacre of Naxalites during 1970-71. These heinous acts were perpetrated by the police, the ruling party, hired assassins, and even factions of the Left Establishment, acting in an unholy alliance (Bandyopadhyay xi).

The 1970s bore witness to inhumane and ruthless torture inflicted upon the revolutionaries by repressive forces. It marked a period when the tide of revolution, originating in North Bengal and spreading southwards, engulfed the entire region. The revolution that ignited in the north surged like a wildfire, reaching every corner. Instances of gunfire, massacres, and death became tragically commonplace. Crossing from one locality to another became perilous for the youth. The day Brati visits Somu's home just before the night that seals his fate hints at the precariousness of moving freely during those tumultuous times. When Brati seeks permission to depart from Somu's home, Somu issues a stark warning:

Why? Are you dying to get killed? Stay here. I too joined in. Don't go, dear, stay here for the night. They were killing the young men of the locality itself; a stranger would be a surer target (Devi 10).

Ironically, Somu's caution and denial of Brati's departure set the stage for an unforeseen turn of events, resulting in Brati's untimely demise that very night, a grim twist of fate. This chilling and jarring realization finds poignant expression in the words of Somu's mother to Sujata, "Who knows, sister? If we had let him go that night, he might have escaped death" (10).

"*Mother of 1084*" captures the era of the 1970s, chronicling the ascension and downfall of the Naxalites. This movement was instigated by the profound idealism of Marx, asserting that the transformation of society could only materialize through the active engagement of the majority against the minority:

All previous historical movements were movements of minorities or in the interests of minorities. The proletarian movement is the self-conscious, independent movement of the immense majority, in the interests of the immense majority. The proletariat, the lowest stratum of our present society, cannot stir, cannot raise itself up, without the whole super incumbent strata of official society being sprung into the air (Marx & Engels 482).

The revolutionary ardour among the activists was so fervent that they fearlessly confronted police gunfire and assaults by hooligans. Numerous instances of open challenges and confrontations are documented in the novel. Somu, Bijit, and Brati make the ultimate sacrifice for the greater social cause. They meet death with a resolve akin to entering matrimony, clasping each other's hands and rallying with spirited slogans of "Long live...! Long live...!" (Devi 16).

However, Nandini's sacrifice surpasses even that of Brati and his group. She becomes a victim of inhuman police brutality while imprisoned. Her words convey the extent of her torment: "The prison. The solitary cell. The worst torture...Yes, the worst kind" (Devi 22). The blazing beams of thousand-watt lamps blind her, followed by the most atrocious form of torture: Saroj Pal's physical violation of her. Nandini hints at the ordeal to Sujata, "I won't be able to tell you all that happened after, (Pause). The sores on skin have healed but I'll never be normal again" (Devi 25). Sujata, too, recognizes the unbearable reality, asserting that "It's more tragic for a living Nandini than for a dead Brati" (Devi 25). Astonishingly, despite the nightmarish sequences, Nandini stands resilient. Glimmers of hope still reside within her. She articulates this resolve when Sujata seeks permission to return to Nandini's home upon her departure: ". No. What do you gain out of coming to me? You live with your past. I have to harness my present, and think of the future" (Devi 26). Nandini emerges as a true adherent of Marxian ideology, embodying the steadfast belief that society will one day transition from division to unity, from class-based to classless.

The novel "*Mother of 1084*" offers a glimpse into the prevalent illusion shrouding the lives of many within humanity. A significant portion of the contemporary society believes that the government-enforced laws and regulations primarily serve the welfare of the majority. However, the true reality presents a stark contrast. These regulations are often crafted by a select group of bourgeoisie to cater to their own class's interests. "The executive of the modern State is but a committee for managing the common affairs of the whole bourgeoisie" (Marx & Engels 475). Nandini's speech unveils how people languish under the cloak of illusion and betrayal:

Betrayal. The prison walls rise higher, new watchtowers shoot up, there are so many young men still in the prisons, and yet a political party will not take a stand until it has been able to determine how it'll serve its own interest and affect its standing with the Centre. Betrayal. The worst reactionaries make avowals of their sympathy for us, and in the process, they

spoil our image in the public eye. Betrayal...And the same ones now write lamentations about us. Betrayal. And...within the prisons..." (Devi 20-21).

This intricate web of illusion and betrayal ensnares almost everyone. The proletariat often believes that those involved in revolution "hate whatever exists" (Devi 19), making them susceptible to the ploys of a handful of bourgeois manipulators.

Individuals like Anindya become ensnared in these machinations, falling prey to the temptations set by the bourgeoisie, ultimately leading to the betrayal and death of figures like Brati and his group. The bourgeoisie at times dangles the allure of material power and benefits, luring the majority into their trap. Nandini acknowledges this fact to Sujata, confessing, "Money, jobs, and power didn't mean a thing to us. But these were the temptations that seduced those who had joined us only to betray us. You shouldn't underestimate the power of those temptations" (Devi 19).

In Mahasweta Devi's artistic portrayal, Nandini emerges as a symbol of menace to the complacent individuals who overlook the prevailing injustices. As a Marxist rebel, she directs her vehement resentment toward all of humanity during her conversation with Sujata:

How can you be so smug and complacent? With so many young men killed, so many imprisoned, how can you wallow in your complacency? It's your 'all's right with the world, let's go on nicely' that frightens me most. How can you carry on with your pujas, concerts, cultural festivals, film festivals, poetry fests? (Devi 26).

In her resistance against societal divisions and injustices, Nandini stands as a bridge between the cunning and strategic bourgeoisie and the ignorant and uneducated proletariat, both favouring and disdaining one another. She endeavours to awaken the uninformed masses, who, despite their actions seemingly emanating hatred for the status quo, harbour an underlying desire to love and revere what lies beneath it all: "behind all our (their) apparent hatred lay a craving to love and to revere" (Devi 19).

The class struggle that emanated from Naxalbari in the Darjeeling district, initially framed as a conflict between landowners and peasants, swiftly evolved into a mass movement wherein numerous young students, regardless of class distinctions, actively participated. Notably, Charu Majumdar, a prominent figure within the movement, played a pivotal role. His call to students in his article titled "The Party's Summon to Today's Students and Youth," published in *Deshbrati* journal, urging them to stand in solidarity with the peasants, wielded a profound influence. He articulated, "...in this extremist revolutionary movement, the educated youth's association is necessary. The student youth are not only educated, but they have immense potentiality: courage for sacrifice and power of adaptability" (*Deshbrati*, 21st August, 1969).

In Mahasweta Devi's "Mother of 1084," the characters Brati and his group are young students hailing from varied social backgrounds yet unified by shared ideals. The ideological kinship among the revolutionaries transcended their class origins. Brati, coming from an elite class, exhibited the same empathy as Somu, a member of a poverty-stricken refugee family, for the vulnerable peasants. Characters such as Nandini, Sanchayan, Dipu, Simran from affluent middle-class backgrounds, as well as Mani and Kushal from left-leaning lineages, felt the same urge to champion the cause of the marginalized as Somu, Laltu, and Bijit from impoverished refugee families. Through Saroj Pal's interrogation of Nandini, the narrative unfolds the involvement of Nandini and her group in arms-related activities. We learn about Mani and Nandini's participation in inter-collegiate rifle shooting, Nandini's resolute decision to train guerrillas in the village, and her plan to learn the manufacturing of pipe guns alongside Partha (Devi 23-24).

The novel lays bare the harsh reality veiled behind the police's repressive mission to quell the revolutionary spirit of the 1970s. It exposes the greed and self-interest of a faction

embodying bourgeois sentimentality. The police ostensibly safeguarded the people while working to benefit the bourgeois class at the expense of commoners' lives. This decade witnessed violence, bloodshed, torture, and repression, engulfing Bengal in a reign of terror. Saroj Pal, the "bloody cur of police," labels the mass action of youthful revolutionaries as "a cancerous growth on the body of democracy" (Devi 9). This underscores the severe conflict and ideological chasm that pervaded the tumultuous period of the seventies.

Blinded by the cascade of promotions in his professional trajectory, Saroj Pal remains oblivious to any positive outcome resulting from the actions of the revolutionaries. His duty perpetually entails quelling mass actions, shifting from one location to another. Swift elevation is granted to him for his supposed "heroic role in the suppression of the Naxalite revolt" (Devi 9), a recognition that he readily embraces. Any traces of humanity seem to have vanished within him, replaced by an inhuman demeanour when dealing with the revolutionaries. Words like compassion and empathy are conspicuously absent from his vocabulary. During Nandini's interrogation, his immorality transcends all bounds. He distorts the very essence of manhood, conventionally seen as the protector of feminine virtue. In the confines of a police station's solitary cell, he subjects Nandini to psychological torment, displaying photographs of the deceased Somu, Bijit, and Brati. He then "bends closer to her, lights a cigarette, presses the lighted cigarette to Nandini's cheek" (Devi 25), and even stoops to physical dishonour.

In reality, Saroj Pal lives a life rife with intrigue and hypocrisy. His outward demeanour is a stark mismatch with his concealed reality. A glaring discrepancy exists between his words and actions, as he attempts to reassure Sujata and her husband Dibyanath by stating, "I know, I too have a mother. No, Mr. Chatterjee, it won't get into the papers" (Devi 9). Meanwhile, he has taken the lives of numerous young revolutionaries, leaving countless mothers bereft of their children. The disturbing and distorted portrayal of the police, manipulated by powerful bourgeoisie, comes to light when no police officer files a report on Somu's father's behalf, despite his son Somu and his group, including Brati, battling against hooligans. This unsettling truth is revealed by Somu's mother during Sujata's visit to her home.

Mahasweta Devi unveils a distorted image of the police force, ostensibly the protectors of democracy and citizens' rights, exposing the illusory realm of misguided principles that ensnares many. This skewed perspective is propagated by a faction of bourgeois individuals. Beyond the social and public sphere, the novel "Mother of 1084" delves into the same portrayal of Marxist class struggle within the realm of the family. In the domestic arena, this struggle may not be as overt as in the societal context, yet the fire of rebellion burns just as intensely, albeit in a subdued and concealed manner. Within Dibyanath's household, Brati's presence is overshadowed by his distinct ideals that stand in stark contrast to those held by the rest of the family. Sujata, too, faces condemnation from her own family due to her unwavering attachment to her son Brati.

In this moment, Sujata's speech serves as a conduit to expose the hypocritical, self-satisfied lives led by the members of Dibyanath's household. Immune to the currents of revolution, they epitomize the majority of humanity who pursue self-centered existences, disconnected from those who champion selfless idealism. This portrayal underscores the broader theme of societal detachment from profound ideologies and the subsequent entrenchment in self-serving routines. Encircled within the confines of narrow and shallow familial ideals, both Brati and Sujata experience the stifling atmosphere of bourgeois sentimentality that envelops them. Relief only comes when they break free from its grasp.

Sujata's concluding speech in the novel "Mother of 1084" not only signifies the awakening of a previously apolitical mother but also conveys a social message to those who turn a blind eye to injustices and other unethical practices perpetuated by the bourgeoisie. "Why don't you speak? Speak, for heaven's sake, speak, speak, speak! How long will you endure it in silence?" (Devi 31) Fueled by fury and indignation, Sujata addresses the lifeless and dormant

masses, branding them as "Corpses, stiffened corpses, all of you!" (ibid). She employs biting sarcasm against those leading a shadowy existence, apathetic to the ongoing injustices, while maintaining a safe distance from those who stand in opposition, sacrificing their lives for the greater good, propelled by vitality and determination: "Do the living die, only to leave the world to the dead to enjoy? No! Never!" (Devi 31) Sujata's final speech serves as the narrative's culmination, encapsulating the novel's purpose—awakening the ignorant proletariat to rise against the cunning and influential bourgeoisie. It delivers a resounding call to action and encapsulates the novel's ultimate intent.

REFERENCES:

1. Bandyopadhyay, Samik. "Introduction". *Mahasweta Devi: Five Novels*. Seagull Books, 1997.
2. *Deshbrati*. 21st August, 1969 & 15th January, 1970 issues.
3. Devi, Mahasweta. "Mother of 1084." *Mahasweta Devi: Five Novels*, Translated by Samik Bandyopadhyay. Seagull Books, 1997, pp 1-31
4. Marx, Karl & Engels, Friedrich. "Manifesto of the Communist Party." *The Marx-Engels Reader*. 2nd ed. Edited by Robert C. Tucker, W.W. Norton & Company, 1978, pp. 469-500

Title of Programme	:-	Conference Paper Presented
Organize by	:-	Department of History ,Shri Shivaji Arts, Commerce and Science College, Akot
		
Date	:-	24/03/2023 to 25/03/2023
Venue	:-	Arvind Babu Deshamukh Mahavidyalaya, Bharsingi, Narkhed, Nagpur
Co-ordinator	:-	Prof. S. P. Kothekar
Assistant Co-ordinator	:-	
Students Co-ordinator	:-	

No. of Teachers Participant	:-	--
No. of Girls Participant	:-	
No. of Boys Participant	:-	
No. of people participant	:-	
Document Attach with Report		

Shri Shivaji Arts, Commerce and Science College, Akot
Report
Paper Published Chapter in books 2023-24
Department of Marathi
<p>Dr. Ashok Ingle, Professors Department of Marathi has Two Paper Published is Chapter in books. Titles - 1) kavi Shesrao Piraji Dhandechi navi anubhuti va navy janivechi kavita. 2) Vanchichnchya mukticha dhys getaleli arjun Dangle yanchi katha.</p>

Chairperson and Chief Guest		
Co-ordinator	:-	
Assistant Co-ordinator	:-	
Students Co-ordinator	:-	
No. of Teachers Participant	:-	Dr. Ashok Ingle , Professors Department of Marathi.
No. of Girls Participant	:-	
No. of Boys Participant	:-	
No. of people participant	:-	
Winner		
Co-ordinator	Head of Department	Principal

‘कवी शेषराव पिराजी धांडेंची नवी अनुभूती व नव्या जाणिवेची कविता’

डॉ. अशोक रा. इंगळे
आकोट, जि. अकोला.

प्रास्ताविक :

समकालीन प्रवाहात ज्यांनी स्वतःला मुख्यतः कवितेतून अभिव्यक्त होणं पसंद केलं त्या मराठीतील नामवंत कवींमध्ये अरुण काळे, लोकनाथ यशवंत, मंगेश नारायणराव काळे, केतन पिंपळपुरे, सुनील अभिमान अवचार, शशिकांत हिगोणेकर व कल्पना दुधाळ इ. कवी, कवयित्रींसोबत आता शेषराव पिराजी धांडेंचा समावेश करावा लागतो. या कवींनी आपली संपूर्ण सर्जनशील प्रतिभाशक्ती केवळ कवितेचा अवकाश समृद्ध होण्यासाठी खर्ची घातली. यातील प्रत्येकाने चारपेक्षा अधिक कवितासंग्रह मराठी वाङ्मय विश्वात दाखल केलेले आहेत. विशेषतः मराठी कवितेच्या मुख्य धारेतील समीक्षकांनी या कवींच्या कवितेची दखल सुद्धा घेतली आहे.

शेषराव पिराजी धांडे हे प्रयोगशील कवी आहेत. ‘बिघडलेले होकार्यत्र’ (२०१९) हा त्यांचा चौथा नवा कवितासंग्रह यापूर्वी त्यांचे “विद्रोही (१९९४), रस्ता सोडून चालला कुठं? (२००९), आमचा आलेख कोराच! (२०१६)” हे कवितासंग्रह प्रकाशित झालेले आहेत. ‘विद्रोही’ या पहिल्या संग्रहात चळवळीच्या तुटलेपणाच्या वेदनेचा स्वर तीव्रपणे उमटतो. ‘रस्ता सोडून चालला कुठं?’ यातील कवितेमध्ये राजकीय व सामाजिक चळवळीच्या स्थित्यंतरातील अंतर्विरोध आणि घडून येत असलेल्या विसंवादाचे कठोर स्वपरीक्षण समोर येते. ‘आमचा आलेख कोराच!’ या संग्रहातील कवितेत रुढप्रेमकवितेपेक्षा वेगळी प्रेमानुभूती त्यांनी आविष्कारली आहे. तथाकथित उच्चवर्णीय वर्गातील प्रेयसी व दलित प्रियकराच्या रक्ताळलेल्या, ठेचाळलेल्या दुःखी मनाची वेदना सामाजिक व्यवहाराच्या पातळीवर प्रकट झाली. म्हणून मराठी कवितेच्या प्रांतात प्रेमकवितेचा हा नवा आविष्कार ठरतो. आता त्रेपन्न कवितांच्या चौथ्या संग्रहात धांडे मोडकळीस आलेल्या वर्तमान समाजव्यवस्थेतील नीती, मूल्य व तत्त्वांच्या पडझडीचा, वैविध्यरूपी प्रवृत्तीचा काव्यात्मक आलेख साकारतात. असा स्वतःच्या शैलीचा प्रयोगशील ठसा उमटवित धांडेंनी चारही संग्रहाला संस्करणीय केले आहे.

अस्वस्थ कार्यकर्त्यांची कविता एक अन्वयार्थ / २७९

समारोप :

एकूणच, शेषराव पिराजी धांडेंची आंबेडकरी जाणिवेची कविता स्वतःचा चेहरा घेऊन प्रकट झाली आहे. सामाजिक भानातून या कवितेने जे चिंतन साकारले ते समकालीन आंबेडकरी कवितेमध्येच नव्हे तर एकूण मराठी कवितेचा अवकाश समृद्ध करणारे आहे.

संदर्भ सूची :

१. नंतर आलेले लोक - अरुण काळे, लोकवाङ्मय प्रकाशन गृह, मुंबई. पृ. ४१.
२. दलित प्रेम कविता - संपादन, डॉ. शरणकुमार लिंबाळे, दिलीपराज प्रकाशन, पुणे. पृ. १०.
३. शेषराव पिराजी धांडे यांचे प्रसिद्ध झालेले चारही कवितासंग्रह.

डॉ. अशोक रा. इंगळे

एकविसाव्या शतकातील दुसरे दशक संपताना अर्जुन उमाजी डांगळे यांच्या गौरवग्रंथाच्या निमित्ताने ‘ही बांधावरची माणसं’ या त्यांच्या कथासंग्रहाविषयी विश्लेषणात्मक मांडणी प्रस्तुत लेखात वर्तमानाचा बदलता संदर्भ लक्षात घेऊन केली आहे.

आंबेडकरी कथालेखनाचा आरंभ बिडू डॉ. बाबासाहेब आंबेडकरांनी काढलेल्या ‘जनता व प्रबुद्ध भारत’ या वर्तमानपत्रामध्ये प्रसिद्ध झालेल्या कथांमध्ये शोधता येतो. बंधुमाधव, अण्णा भाऊ साठे व शंकरराव खरात यांना पुढे दलितमुक्ती कथेचे शिल्पकार संबोधले गेले. या कथाकारांना ‘दलित’ हे संबोधन इथल्या प्रस्थापित अभिजन व्यवस्थेने बहाल केले. कालांतराने हीच संज्ञा भारतीय स्तरावर रुढ होऊन स्थिरस्थावर झाली हे सर्व विदितच आहे.

अर्जुन डांगळे यांचा ‘ही बांधावरची माणसं’ हा कथासंग्रह प्रथम मागोष्ठा प्रकाशन, पुणेद्वारा १९७९ मध्ये प्रसिद्ध झाला. त्यापूर्वी मराठी साहित्याच्या प्रांतात बाबुराव बागुल यांनी कथाकार म्हणून आपली नाममुद्रा ठळक केली होती. मराठी कथेचा प्रांत त्यांनी खऱ्या अर्थाने विस्तीर्ण केला होता. दलित

२२२ / छात्राणी

वैशिष्ट्यपूर्ण ठरते. ग्रामीण आणि नागरी भावविश्वाला ती एकाच वेळी कवेत घेते. मोजकी पात्ररचना घेऊन आशय व्यक्त करणे हे डांगळेच्या कथारचनेचे वैशिष्ट्य म्हणावे लागते. ‘ही बांधावरची माणसं’ या कथासंग्रहातील अकराही कथारचनेतून त्याची प्रत्ययकारिता येते.

एकूणच, दलितमुक्तीसाठी लिहिली गेलेली डांगळे यांची कथा प्रचाराची धाटाची नाही. या कथेची त्वचा संघर्षात्मक बाण्याची आहे. या कथेतील आशयविश्वामागे सच्चा कार्यकर्त्यांचे सक्रिय मन विशिष्ट मूल्यजाणिवेने घडपडते. ही मूल्यजाणीव उपेक्षितांच्या मानवमुक्तीची आहे. म्हणूनच या कथेला वंचितांच्या कल्याणाचा ध्यास लागलेला आहे. त्यामुळे ती आपल्या समाजाचे पक्षधर म्हणून समर्थपणे प्रतिनिधित्व करते, असे म्हटले तर वावगे ठरणार नाही.

७३

Vidya Bharati Shaikshanik Mandal's

VIDYA BHARATI MAHAVIDYALAYA, AMRAVATI

Re-accredited with Grade 'A' by the NAAC (CGPA 3.23-Third Cycle)

College with Potential for Excellence

In Collaboration with



S.S.S.K.R. INNANI MAHAVIDYALAYA, KARANJA (LAD) DIST. WASHIM

Re-accredited by NAAC with Grade 'A+' (CGPA 3.28 - Third Cycle) College with Potential for Excellence

UGC Sponsored National Conference on

Recent Advancements in Science and Technology

10th February, 2024

CERTIFICATE

This is to certify that Prof / Dr / Mr/Ms. _____

Mz. Snehal Gajanan Rodge

of

Shri Shivaji Art's Commerce and Science College Akot

has

actively participated in the Conference held on 10th February, 2024 and has attended / presented a research paper/oral/poster

in the subject **Zoology**

entitled **Growth promoter effect of garlic (*Allium sativum*) oil on catfish *Clarias Batrachus* (Linnaeus, 1758)** during technical session of the conference.

Dr. P. G. Bansod

IQAC Co-ordinator
VBMV, Amravati &
Organizing Secretary

Dr. G. T. Lamdhade

Organizing
Secretary

Dr. A. N. Deore

Principal & Co- Convenor
S.S.S.K.R.I. Mv., Karanja (Lad)

Dr. P. S. Yenkar

Principal & Convenor
VBMV, Amravati



STUDY OF DIETARY GARLIC INDUCED EFFECTS ON BIOCHEMICAL PROFILE OF *Clarias Batrachus* (LINNAEUS, 1758)

Rodge SG¹ and Thakare VG²

¹Department of Zoology, Shri Shivaji Arts, Commerce and Science College, Akot, Maharashtra, India

²Department of Zoology, Government Vidarbha Institute of Science and Humanities, Amravati, Maharashtra, India

ABSTRACT

The present work was carried out to study the effect of dietary garlic on biochemical profile of *Clarias batrachus*. The fish were fed on control and experimental diet for 30 days. The collected samples were analyzed for biochemical profile by using automated analyzers. The results proved that dietary garlic improved the lipid profile, protein and albumen content of serum. The obtained results cleared that dietary garlic (*Allium sativum*) improved the biochemical profile of *Clarias batrachus* so garlic should be added to the diets of fish.

Keywords: *biochemistry, Clarias batrachus, feeding formulated diet, garlic.*

Introduction

The species *Clarias batrachus* is locally known as Magur. It has an elongated body shaped and reaches almost 0.5 m in length and 1.2 kg in weight. It is mainly grey or grayish brown in colour; often covered laterally in small white spots. It has long based dorsal and anal fins, several pairs of sensory barbells. The skin is without scales but covered with mucous which protect the fish when it is out of water. This fish is normally lives in slow moving and stagnant water of ponds, swamps, streams and rivers, paddy fields or temporary pools (Joshi and Gulhane, 2015). The garlic supplementation to the diet of *Clarias batrachus* help to improve the growth performance. It is probably one of the earliest known medicinal plants. Garlic contains Alliin, Allicin and volatile oils. Allicin gives garlic its characteristic pungent smell. Also, it contains vitamins and minerals and trace elements like selenium and germanium (Hassaan *et al.*, 2014; Joshi *et al.*, 2015; Hassaan and Soltan, 2016; Joshi and Gulhane, 2017, Petropoulos *et al.*, 2018).

The present work was carried out to study the effect of dietary garlic on hematological profile of *Clarias batrachus*.

Material and methods

Materials and Methods

The present investigation aimed to analyze the effects of dietary garlic on biochemical profile of *Clarias batrachus*. For the presented experiment, the following protocol suggested by Joshi (2017) was adopted

Experimental fish: The fishes measuring about 20±0.5 cm length and weighing ranges from 50±05g in weight were selected for the experimental study. Fishes were transferred to the place of experiment and acclimated for a week. During the acclimation, fish were fed the experimental diet to satiation twice a day at 09:00 and 15:00 hours. After acclimation, fish were fasted for one day; batch weighted and randomly distributed among density of 10 fish per tank. During experiment, the water quality, aeration and light: dark cycle of 12:12 h was maintained (Joshi *et al.*, 2015).

Experimental diet and feeding regime: The basal experimental diets were formulated with the commonly available ingredients. The formula and analyzed proximate composition of the basal diet are shown in Table 1. The ingredients were dried, grinded, milled, weighed, mixed and pelleted. After pelleting, the feeds were air dried and put in an air-tight container. During the experiment, fish were fed the experimental diet to satiation third a day at 08:00, 12:00 and 16:00 hours.

Table 1: Formulation of experimental fish diets with different concentration of garlic powder and oil (g/100g diet).

Sr.	Ingredients (g dry wt.)	Control	Garlic Powder		Garlic Oil	
		G1	G2	G3	G4	G5
1.	Wheat flour	45	42.5	40	43.75	42.5
2.	Soybean flour	25	25	25	25	25
3.	Corn flour	10	10	10	10	10
4.	Meat powder	15	15	15	15	15
5.	Soybean oil	05	05	05	05	05
6.	Garlic Powder	-	2.5	5	1.25	2.5

Table 2: Serum biochemistry of freshwater fish *Clarias batrachus* fed on control and garlic formulated diet for 30 days

Sr. No.	Parameter	Control		Garlic Powder				Garlic Oil			
		G0		G1 (2.5 %)		G2 (5%)		G3 (1.25 %)		G4 (2.5 %)	
		Mean	+SD	Mean	+SD	Mean	+SD	Mean	+SD	Mean	+SD
1.	Serum Triglycerides (mg/dl)	230.7	0.68	300	0.884	392.19	1.156	346.05	1.02	438.33	1.292
2.	Serum Total Cholesterol (mg/dl)	459.84	12.84	419.84	18.12	336	31.68	402.8	22.04	335.2	21.36
3.	HDL- Cholesterol (mg/dl)	50.2	1.42	65	1.846	85.34	2.414	75.3	2.13	95.38	2.698
4.	LDL- Cholesterol (mg/dl)	319.39	3.116	290.3	2.132	270.77	2.788	280.15	2.46	220.1	1.64
5.	VLDL- Cholesterol (mg/dl)	66.88	2.28	59.84	2.04	46.0	1.56	52.8	1.8	35.2	1.2
6.	Total Serum Protein (g/dl)	7.8	1.2	10	1.56	13.26	2.04	11.7	1.8	14.82	2.28
7.	Serum Albumen (g/dl)	6	0.5	8	0.65	10.2	0.85	9	0.75	11.4	0.95
8.	Serum Glucose (mg/dl)	101.023	2.242	90.389	2.006	69	1.534	79.755	1.77	53.17	1.18
9.	Serum Creatinine (mg/dl)	1.11	0.21	1	0.273	1.887	0.357	1.665	0.315	2.109	0.399

Biochemical Analysis: After 30 days of feeding, the blood samples of fish were collected directly from heart with the help of syringe. The blood samples were preserved into the vials. The biochemical estimations were performed by using the automated analyzer (Kharat and Kothavade, 2012).

Statistical Analysis: Data were collected, organized and analyzed by using Microsoft

Excel program. Results were recorded as mean \pm standard deviation (SD) of survived individuals.

Results and Discussion

It is cleared that garlic is one of the main vegetable that extensively cultivated in many countries. It is used as food for humans as well as some animals and as remedy for several diseases, as reported in folk medicine. The effects of dietary garlic on biochemical

profile of *Clarias batrachus* after 30 days were studied. The results related to serum biochemistry of *Clarias batrachus* fed on control and experimental diets for 30 days were as given below (Table 2). The results proved that dietary garlic improved the Hematological composition, lipid profile, protein and albumen content of serum.

The serum biochemical variables are good predictors for explaining the health status of fish (Hrubec *et al.*, 2000) and the improvement in hematological and biochemical profile of fish is mostly influenced by environmental factor and diet supplementation (Acharya and Mohanty, 2014; Rao *et al.*, 2017). Serum Biochemical content in fish gives a guide to the health status of fish and can be helpful to determine any abnormalities arising from the use of feed additives. Furthermore, Fazlollahzadeh *et al.* (2011) assumed that the improved biochemical indices such as lipid profile, total protein, albumen attributable to the improved metabolic activities. The serum glucose and creatinine level was not significantly different in control and experimental fishes. The present study is consistent with previous studies of Sahu *et al.*, (2007); Soltan and El-Laithy (2008); Talpur and Ikhwanuddin (2012); Yilmaz and Ergün (2012); Hassaan *et al.*, (2014); Hassaan and Soltan (2016), Adineh, *et al.* (2020); Akter and Hossain (2021); Edeh *et al.* (2022) and name a few. Hence these findings suggested that the present improvement in hematological and biochemical profile is influenced by dietary garlic.

Conclusion

The obtained results cleared that dietary garlic (*Allium sativum*) improved biochemical profile of *Clarias batrachus* so garlic should be added to the diets of fish.

References

1. Acharya G, Mohanty P, 2014. Comparative haematological and serum biochemical analysis of catfishes *Clarias batrachus* (Linnaeus, 1758) and *Heteropneustes fossilis* (Bloch, 1794) with respect to sex. J. Entomol. Zool. Stud., 2(6): 191-197.
2. Adineh, H., Harsij, M., Jafaryan, H., Asadi, M. 2020. The effects of microencapsulated garlic (*Allium sativum*) extract on growth performance, body composition, immune response and antioxidant status of rainbow trout (*Oncorhynchus mykiss*) juveniles. Journal of Applied Animal Research, 48(1), 372-378.
3. Akter T., Hossain A. 2021. Effects of spirulina (*Arthrospira platensis*) as a fishmeal replacer in practical diets on growth performance, proximate composition, and amino acids profile of pabda catfish (*Ompok pabda*) Journal of Applied Aquaculture 35(1) 69-82.
4. Edeh IC, Olise CS, Ononye BU, Ikechukwu CC, Nwankwo CG, Okoli IK 2022. Nutraceutical Role of Honey and Garlic (*Allium sativum*) on Haematological and Plasma-Antioxidant Profile of African Catfish (*Clarias gariepinus*) Asian Journal of Biology, 16(3): 43-52.
5. Fazlollahzadeh F, Keramati K, Saeed N, Shirian S, Samira S, 2011. Effect of garlic (*Allium sativum*) on hematological parameters and plasma activities of ALT and AST of rainbow trout in temperature stress. Austr. J. Bas. Appl. Sci., 11(5): 84-90.
6. Hassaan M, Soltan M, Ghonemy M, 2014. Effect of synbiotics between *Bacillus licheniformis* and yeast extract on growth, hematological and biochemical indices of the Nile tilapia (*Oreochromis niloticus*). Egy. J. Aquat. Res., 40(1): 199-208.
7. Hassan MS, Soltan MA, 2016. Evaluation of Essential Oil of Fennel and Garlic Separately or Combined with *Bacillus licheniformis* on the Growth, Feeding Behaviour, Hemato-biochemical Indices of *Oreochromis niloticus* fry. J. Aqua. Res. Develop., 7(4): 1-8.
8. Hrubec TC, Cardinale JL, Smith SA, 2000. Hematology and plasma chemistry reference intervals for cultured tilapia (*Oreochromis hybrid*). Vet. Clin. Pathol., 29(1): 7-12.
9. Joshi PS, 2017. Dietary garlic induced growth performance, whole body

- composition and survival in *Clarias batrachus* (Linn.). Proceeding of N.C.R.A.O.B.S., 2017:36-3
10. Joshi PS, Gulhane RA, 2015. Effects of dietary garlic on growth performance in the fresh water fish *Clarias batrachus* (Linn.). Int. J. Res. Biosci., Agri., Tech., 2(3): 244-246.
 11. Joshi PS, Gulhane RA, 2017. Effect of Dietary Garlic on Whole Body Composition in the Fresh Water Fish *Channa Punctatus*. Int. J. Adv. Res. Sci Eng., 6(8): 01-04
 12. Joshi PS, Tantarapale VT, Kulkarni KM, 2015. Dietary Garlic Induced Productive Performance in the fresh water fish *Clarias batrachus* (Linn.). Proceeding of N.C.A.S.R.C., 2015: 78-79
 13. Kharat S, Kothavade S, 2012. Hematological study of *Clarias batrachus* with reference to Trypanosomiasis. Trends Fish. Res. 1(1): 6-9.
 14. Petropoulos SA, Fernandes A, Ntasiltsi G, Petrotos K, 2018. Nutritional value, chemical characterization and bulb morphology of Greek garlic. Molecule, 23(6): 1-14
 15. Rao J, Nilima P, Rao K, 2017. A review on the toxicity and other effects of Dichlorvos an organophosphate pesticide to the freshwater fish. Biosci. Discov., 8(3): 402-415.
 16. Sahu S, Das BK, Mishra BK, Pradhan J, Sarangi N, 2007. Effect of *Allium sativum* on the immunity and survival of *Labeorohita* infected with *Aeromonas hydrophila*. Journal of Applied Ichthyology 23(1): 80-86.
 17. Soltan MA, El-Laithy S, 2008. Effect of probiotics and some spices as feed additives on the performance and behaviour of the Nile tilapia, *Oreochromis niloticus*. J. Aquat. Biol. Fish., 12 (1): 63-80.
 18. Talpur AD, Ikhwanuddin M, 2012. Dietary effects of garlic (*Allium sativum*) on haemato-immunological parameters, survival, growth, and disease resistance against *Vibrio harveyi* infection in Asian sea bass, *Lates calcarifer* (Bloch). Aquaculture, 36(4): 6-12.
 19. Yılmaz S, Ergün S, 2012. Effects of garlic and ginger oils on hematological and biochemical variables of Sea Bass *Dicentrarchus labrax*. J. Aquat. Anim. Health. 24 (2): 219-224.



Vidya Bharati Shaikshanik Mandal's

**VIDYA BHARATI
MAHAVIDYALAYA, AMRAVATI**

Re-accredited with Grade 'A' by the NAAC (CGPA 3.23 - Third Cycle)
College with Potential for Excellence (CPE Status Thrice by the UGC)
Star College Status by DBT, New Delhi, Mentor College' under Paramarsh by UGC
Identified as 'Lead College' by S.G.B. Amravati University, Amravati



ज्ञान-विज्ञान विभूतये

UGC - Sponsored

**National Conference on
Recent Advancements in
Science and
Technology**

10th Feb 2024

- Organized by
Vidya Bharati Mahavidyalaya
C.K. Naidu Road, Camp, Amravati - 444 602, (M.S.), India
Website: www.vbm.v.org | Phone & Fax: 0721-2662740

In Collaboration with
S.S.S.K.R. Innani Mahavidyalaya,
Karanja (Lad), Dist. Washim 444 105 (M.S.), India

Dietary Wheatgrass Induced Effects on Nutrient digestibility in Freshwater Fish

Channa Punctatus (Bloch, 1793)

Dr. Prasanna Subhash Joshi

Assistant Professor, Department of Zoology

Shri Shivaji Arts, Commerce and Science College, Akot, Dist. Akola, Maharashtra (India)

Abstract

Study aims to assess the dietary wheatgrass induced effects on nutrient digestibility in freshwater fish *Channa punctatus* (Bloch, 1793). Fishes were fed on control and wheatgrass (3 %, 6%, 9 %, 12%, 15 %) based formulated feed. It shows that the dry matter digestibility increases from 94.43 ± 1.21 to 94.97 ± 1.89 %; organic matter digestibility improved from 87.46 ± 2.90 to 89.47 ± 1.97 %; crude protein digestibility increased from 90.25 ± 2.05 to 92.16 ± 2.44 %; crude lipid digestibility increased from 89.12 ± 2.13 to 90.01 ± 2.29 %; nitrogen digestibility increased from 88.76 ± 2.44 to 90.45 ± 2.50 % and digestible energy was observed to be enriched from 89.66 ± 2.75 to 91.54 ± 3.12 . The control and test feed groups were not significantly different ($P < 0.05$) from each other. The nutrient digestibility in fish fed on control and wheatgrass based formulated fish feed showed the improved dry matter, organic matter, crude protein digestibility, crude lipid digestibility with enriched digestible energy with group fed with high level of dietary wheatgrass.

Keywords: *Channa Punctatus*, Formulated feed, Freshwater Fish, Nutrient digestibility, Wheatgrass

