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2.	DR.R.Sundaramoorthi	Nattupuraviyal Kotpatugal	-	9789389707908'	Saradha Pathipagam, Chennai-14
3.	Dr.T.Selvankumar	Microbial Biodegradation of Xenobiotic Compounds	Bioaugmentation and Biostimulation Remediation Technologies for Heavy Metal Lead Contaminant	9781-138743922	CRC Press Taylor and Francis group
4.	Dr.T.Selvankumar, Dr.C.Sudhakar	Microbial Biodegradation of Xenobiotic Compounds	Microbial Removal of Dye Stuffs	9781-138743922	CRC Press Taylor and Francis group
5.	Dr.K.Selvam Dr.T.Selvankumar	Microbial Catalysts	Industrial Applications of Microbial Enzymes	978-1-53616-088-8	Nova Science Publishers
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Innovations and Technologies for Soft Skill Development and Learning




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Kalippatti (PO) - 637 501, Namakkal (DT)

Suresh Kumar Nagarajan and Mohanasundaram R.

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Chapter 6

An Experiential Study on the Learners' Perception of E-Learning and Traditional Learning

Anu Baisel
VIT University, India

Vijayakumar M.
VIT University, India

Sujatha P.
Mahendra Arts and Science College, India

ABSTRACT

The teaching-learning process had been confined to the classrooms before technology found its place in the field of education. The classrooms were either student-centred or teacher-centred. The scenario changed slowly and classroom instruction became technology-supported. Today's learners, the digital natives, rely more on technology rather than teachers. The drastic change raised a question whether they need teachers or technology for higher levels of learning and the possible results. In order to find out an answer to this question, a study was conducted among the young engineering graduates belonging to a private technical institution in Vellore district, Tamil Nadu. Surprisingly, the results favoured the traditional mode of teaching in spite of the numerous advantages listed out by the respondents.

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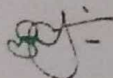
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Innovations and Technologies for Soft Skill Development and Learning

Traditional education revolves around the teaching of technical skills, especially within STEM fields. However, soft skills—broadly, communication and intrapersonal skills—are essential within all fields, especially those frequently involving research and collaboration. However, the focus on teaching students to be adept communicators and team members remains woefully underdeveloped.

Innovations and Technologies for Soft Skill Development and Learning is a pivotal reference source that explores the mental and psychological growth of individual learners at different stages of education concerning soft skills and the need for innovation and creativity to lead a successful career. Highlighting topics including higher education, emotional intelligence, and student behavior, this book is ideally designed for educators, curriculum developers, instructional designers, administrators, policymakers, academicians, researchers, and students.

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- Emotional Intelligence
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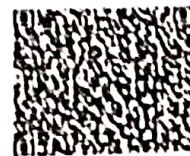
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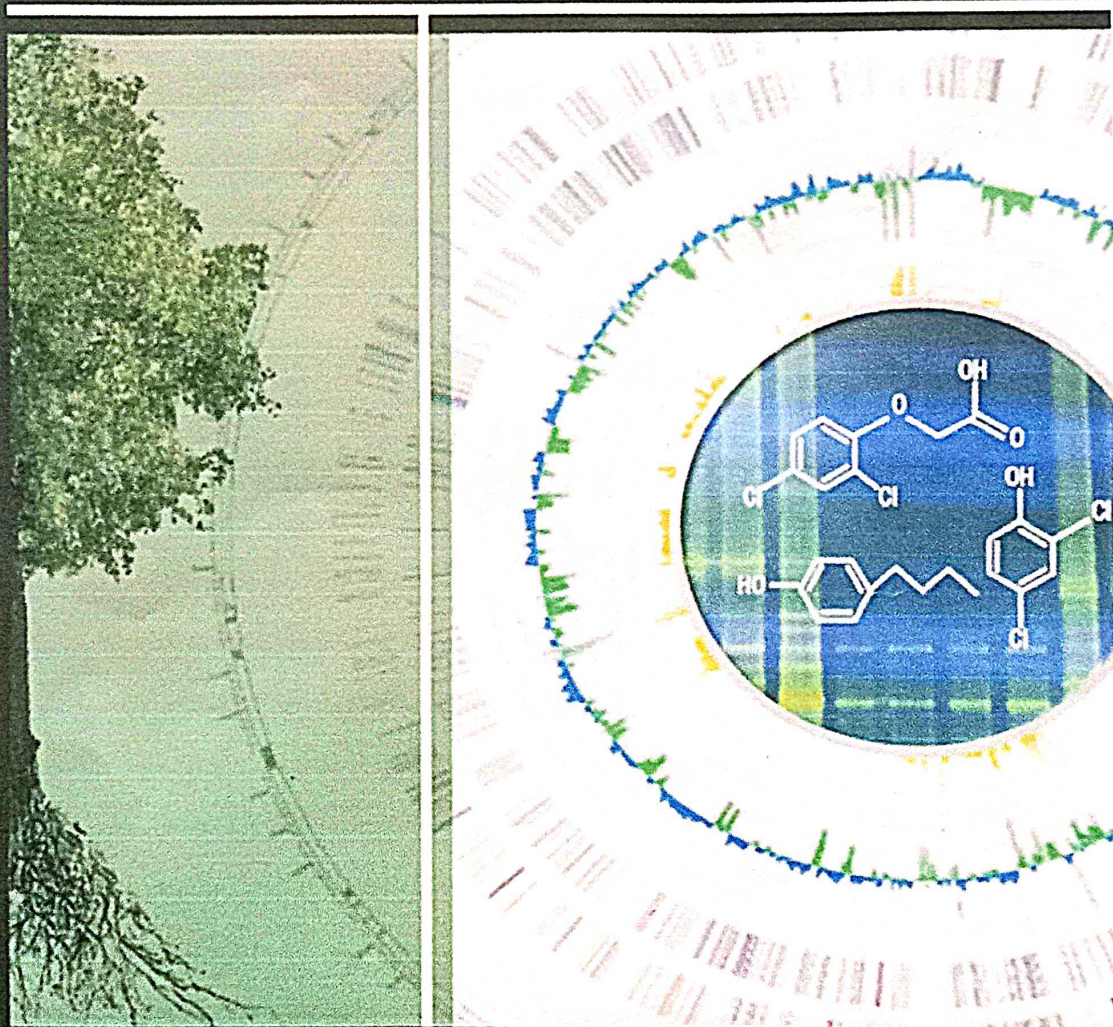
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Microbial Biodegradation of Xenobiotic Compounds



Young-Cheol Chang (ed.)



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Editor

Young-Cheol Chang

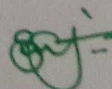
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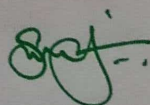
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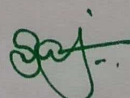
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2

Bioaugmentation and Biostimulation Remediation Technologies for Heavy Metal Lead Contaminant

K. Jayaprakash,¹ M. Govarathanan,^{2,3,} R. Mythili,³
T. Selvankumar³ and Young-Cheol Chang²*

INTRODUCTION

Bioremediation is defined as the increase of the rate of the natural metabolic process using microorganisms to alter and break down organic molecules into other substances. According to the United States EPA, bioremediation is defined as treatment that uses naturally occurring organisms to break down hazardous substances into less toxic or non-toxic substances.

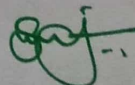
Bioremediation is an ecologically advanced technique that employs natural biological activities employing microorganisms, fungi, green plants or their enzymes to return the natural environment altered by contaminants to its original condition. With rapid industrialization all over the world, the pollution rate also increases.

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6

Microbial Removal of Dye Stuffs

T. Selvankumar, C. Sudhakar and M. Govarthanan**

Chemical Nature of Dyes

Dyes can generally be described as colored substances that have an affinity to the substrates to which they are being applied (Pereira and Alves 2012). They absorb light in the visible spectrum (400–700 nm) with at least one chromophore (colour-bearing group). They have a conjugated system, that is, a structure with alternating double and single bonds, and exhibit resonance of electrons, which is a stabilizing force in organic compounds (Hossain 2014).

The components of the dye consist of chromogen, that is, a chemical compound that is either colored or could be made colored by the attachment of a suitable substituent. The chromophore and the auxochrome(s) are also part of the chromogen (Carmen and Daniela 2012). The chromophore is a chemical group that is responsible for the appearance of color in compounds (the chromogen) where it is located (Fig. 1).

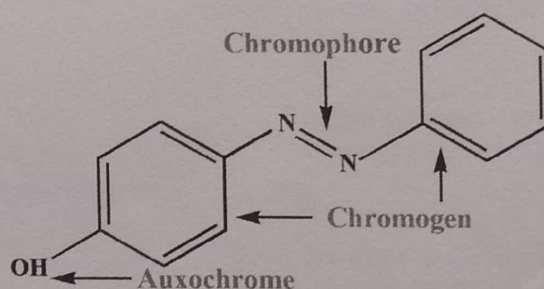


Fig. 1: The components of dye (e.g., 4-Hydroxyazobenzene).

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MICROBIOLOGY RESEARCH ADVANCES

Microbial Catalysts

Volume 2



Shadia M. Abdel-Aziz, Ph.D. • Neelam Garg, Ph.D.
Abhinav Aeron, Ph.D. • Chaitanya Jha, Ph.D.
S. Chandra Nayak, Ph.D. • Vivek Kumar Bajpai, Ph.D.

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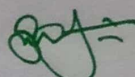
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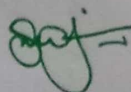


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INDUSTRIAL APPLICATIONS OF MICROBIAL ENZYMES

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ABSTRACT

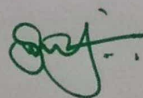
Enzymes play a crucial role as metabolic catalysts, leading to their great importance in the development of industrial bioprocesses. Current applications focuses on many different markets including cleaning (detergents), textiles, starch processing, brewing, leather, baking, paper, food products, animal feeds, cosmetics and personal care. The use of enzyme technology is attractive because enzymes are highly efficient to specific, and work under mild conditions. The use of enzymes results in reduce the process time, energy, water, and also improved product quality and potential process integration. The chapter covers the most important applications of microbial enzymes in various industrial processes.

Keywords: biocatalysis, microbial enzymes, applications, industry

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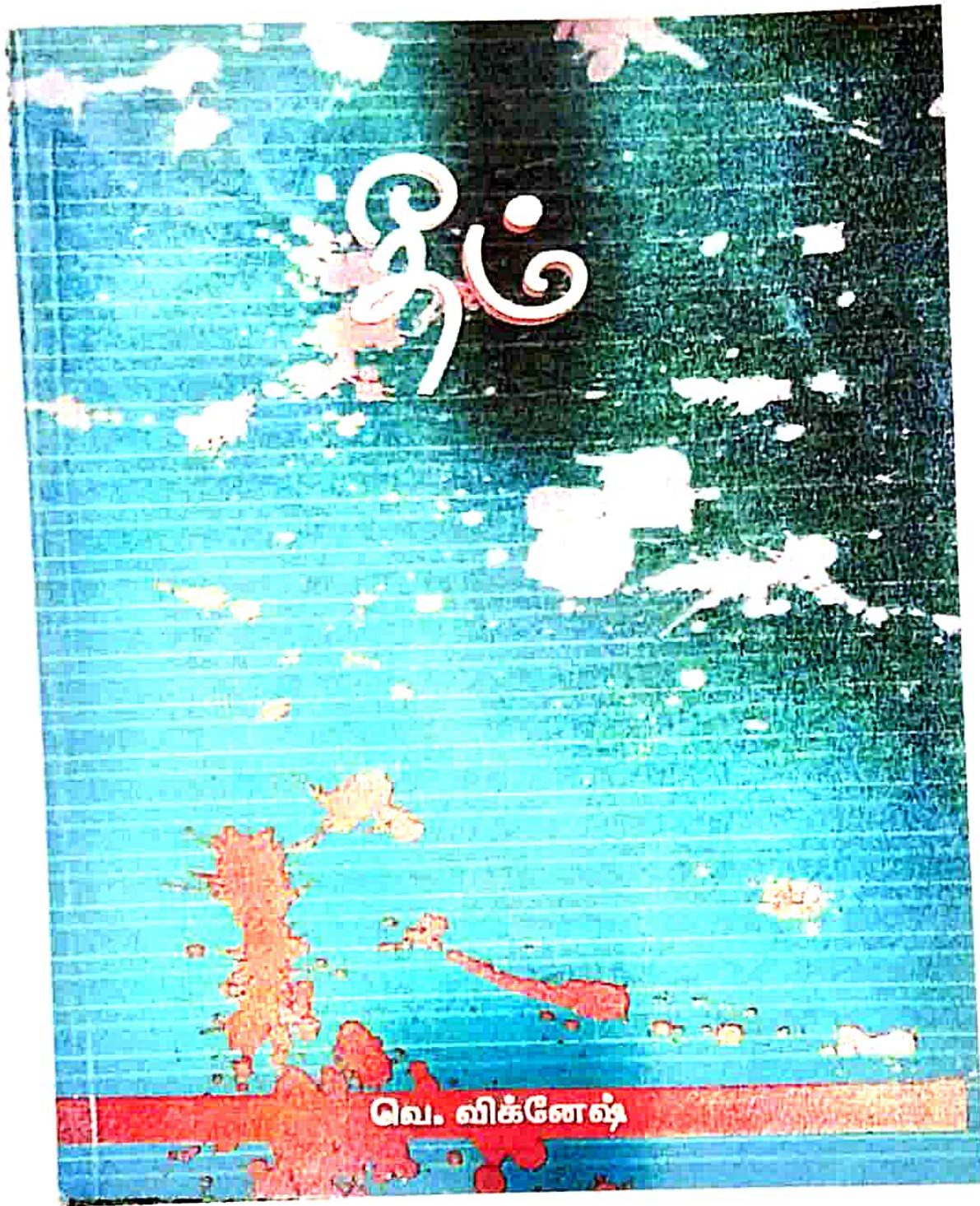
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12

NOVEL TRENDS AND TECHNIQUES IN LITERATURE AND LANGUAGE RESEARCH

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PERCEPTION OF E-LEARNING AND TRADITIONAL LEARNING

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ABSTRACT

Teaching-learning process had been confined to the classrooms before technology found its place in the field of education. The classrooms were either student-centred or teacher-centred. But the scenario got changed slowly and classroom instructions became technology-supported. Learners today, the digital natives, rely more on technology rather than teachers. The drastic change raised a question whether they need teachers or technology for higher levels of learning and the possible results. In order to find out an answer to this question, a study was conducted among the young engineering graduates belonging to a private technical institution in Vellore district, Tamil Nadu. Surprisingly, the results favoured the traditional mode of teaching in spite of the numerous advantages listed out by the respondents.

Keywords: E-LEARNING, TRADITIONAL LEARNING, INNOVATIVE TEACHING

INTRODUCTION:

Technology was initially introduced to enhance the quality of learning in distance learning programmes. However, there has

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ubious utilization of online resources by everyone. At present, innovative teaching, collaborative, interactive teaching-learning and technology-enabled learning have become the order of the day. Even though the e-learning has taken a step forward, the learners' passion for traditional learning has not come down. However, there is an illusion that there is a lack of passion for traditional learning methods among the learners. Therefore, it is the need of the hour to read the minds of the learners and introduce appropriate teaching methodologies. As e-learning is a self-motivated and learner-centred concept, a study has been carried out among the undergraduate students who have more exposure to technology and e-learning methods than the primary and secondary level learners. The objective of the study is to find out the appropriate learning method and bring it out to the rest of the learners.

METHODOLOGY:

A survey was conducted among the engineering students studying in a private technical institution in Vellore district, Tamil Nadu. Primary data were collected through a random survey across the institution. Since the researcher felt that the participation of respondents from different disciplines would give fruitful results, respondents from almost all the faculties were involved. A questionnaire was prepared and circulated to the respondents. 64 respondents gave their feedback along with a few suggestions. The study focused only on general learning aspects and it is not subject specific. This may be one of the limitations of the study. If the same study is performed on subject-specific aspects, the results may vary.

REVIEW OF LITERATURE:

Numerous studies have been conducted to examine the difference between e-learning and traditional learning experiences. Wong, W. K., & Ng, P. K. have made an

the respondents think that they can be trained well only when they are taught face to face. However, almost equal number of respondents (49%) prefer e-learning. The decision made by the respondents clearly shows that they are unmindful of the mode, medium or the teacher but the passion for the job and the determination about the future drive them towards a suitable learning method. In terms of acquiring knowledge, the mode is chosen by the learner based on the environment and convenience, especially at higher levels of learning. 81% of the respondents say that e-learning saves their time. They are of the opinion that the time spent on commuting to the institution can be spent on learning purposes. Hence, they prefer e-learning.

Validity or worthiness of the certificate depends on the mode with which it is acquired. The certificate acquired after attending traditional learning classes is considered more valuable than the e-learning certificate especially in job interviews. 86% of the respondents insist on the same and their view about the e-learning certificate is, it is easy to acquire and the credibility (of the person who did the course) is prone to suspicion. While talking about the thorough learning or flawless learning, 80% of the respondents say that it happens only in traditional learning because the teacher is there to clear everything, but in e-learning, most of the websites provide coded answers to the possible expected questions from the learners. Those answers may be appropriate but the learners may not be comfortable with them. In terms of affordability, many respondents (57%) favour e-learning as it is cheaper than traditional learning. A teacher can address only a limited number of learners in a classroom but in e-learning, number doesn't matter as anyone can view the lecture virtually and retrieve it at his convenience.

Reading has become obsolete nowadays. If any assignment is given, most of the learners, instead of referring to books, surf the net sources and complete the assignment.

investigation in 2016 and revealed that the results favoured e-learning as it is less expensive and more comfortable. Another study undertaken by AL-Omari and Salemeah in 2012 conveys that traditional learning lacks flexibility and affects the scores of the learners whereas e-learning enhances both the scores and skills of the learners. Sethughes (2012) states, in his argument, that traditional learning is better than online learning as it lacks personal interaction with the teacher. Vaona et al. (2018) have discussed that e-learning is learner-friendly and it makes room for personalized instructions so that the learners can adjust the duration of the course and contents depending on their needs. Sarrah M, et al. (2014) opine that feedback on the lecture is imminent in traditional learning methods whereas in e-learning feedback is a pre-defined activity taking place at the programme designer's need and convenience. In traditional learning, the teacher's preparation for the class and delivery of the lecture are limited, and in e-learning, the materials and resources are unlimited (Rondon 2013). In all these studies, the results and arguments are not one-sided. Some studies support e-learning and some others favour traditional learning.


RESULTS & DISCUSSION:

With regard to the question related to the attention paid to the lectures, 69% of the respondents have replied that their attention is more only on the traditional learning methods. As the teacher addresses the learners face to face, there is less possibility of diverting the attention whereas in e-learning, the possibility of diversion is more. Equal number of respondents further feels that the distraction features (friends and peers) are less effective in traditional learning than in e-learning (movies, games, advertisements). While responding to the question about knowledge acquisition, the respondents are equally divided in their opinion. 51% of the respondents favour e-learning and 49% favour traditional learning. At the same time, the ratio is vice-versa when asked about career orientation. 51% of

Their choice of listening to a lecture favours traditional learning whereas reading relies on the internet. According to the statistics acquired, 65% of the respondents prefer to look for e-resources. Learning should develop one's critical thinking too. 70% of the respondents affirm that the traditional classrooms are the suitable places to improve the learners' critical thinking skill. When the respondents were asked about one specific skill that they acquired through traditional learning, 27% of the respondents felt that they were able to develop their communication skill and 25% of them said that there existed a healthy competition among the classmates and peers. Simultaneously, for the question about e-learning, exactly the same number of respondents answered that they learnt about time management and independent learning respectively. By and large, both the learning methods have advantages one over the other.

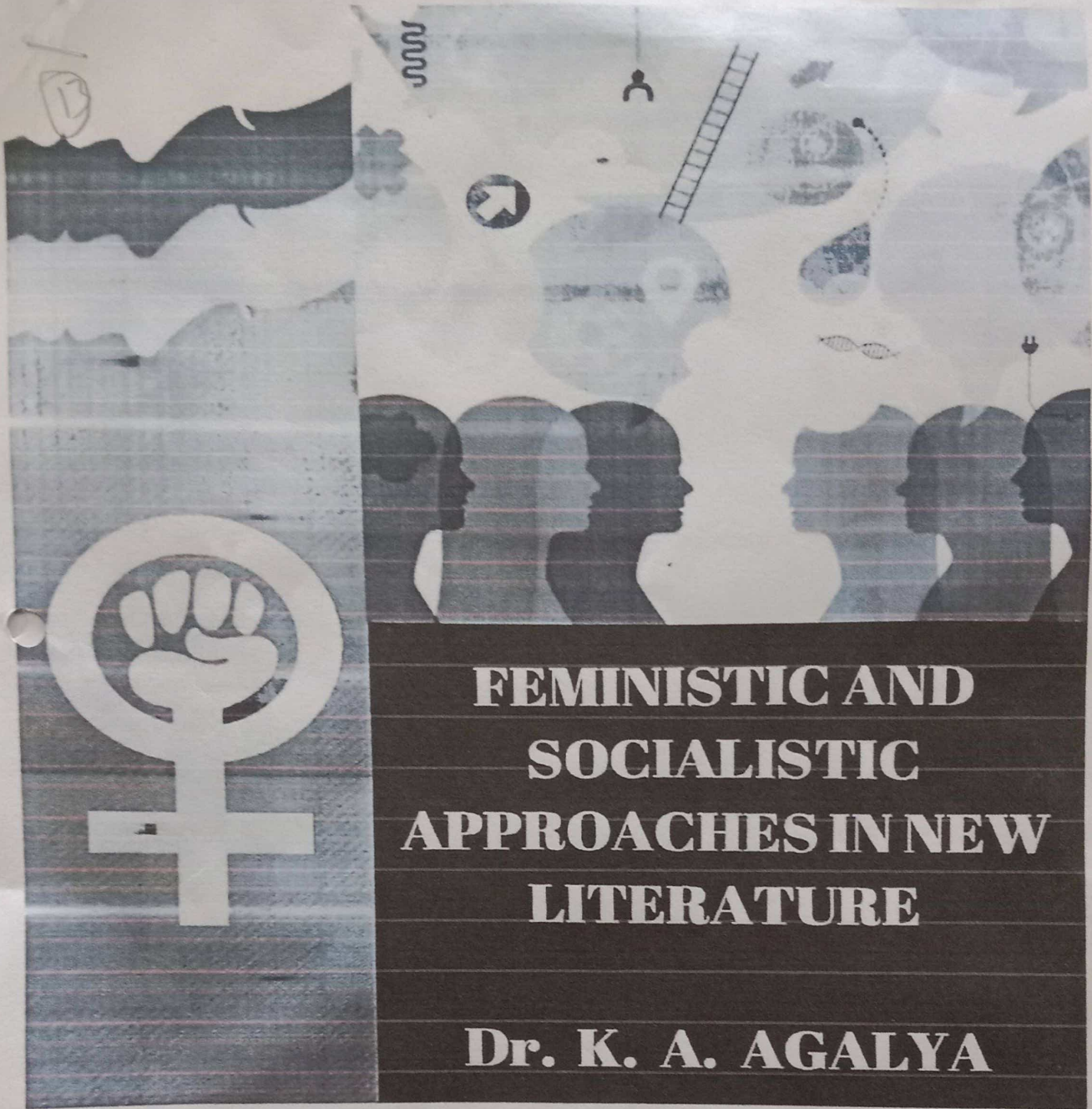
FINDINGS:

1. E-learning is cost-effective and flexible.
2. The lecture can be watched as many times as possible in e-learning.
3. Time management and independent learning are the benefits of e-learning.
4. Distraction is unavoidable in e-learning.
5. Certificate acquired through e-learning seems to have less weightage.
6. E-learning can be advocated to higher levels of learning or to the self-motivated learners.
7. Attention span is the maximum in traditional learning.
8. Collaborative learning environment is provided in traditional learning.
9. Face-to-face interaction is a ready reckoner for most of


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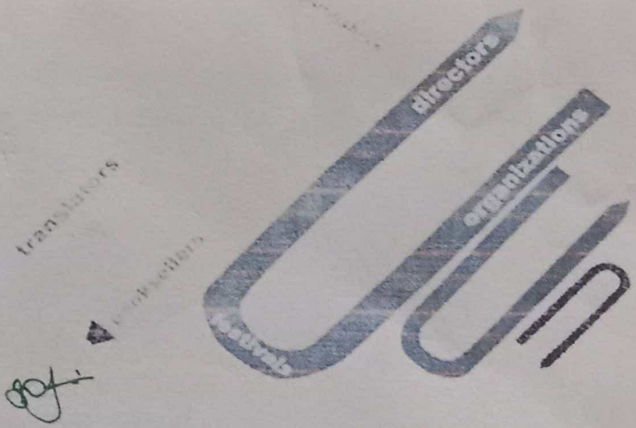
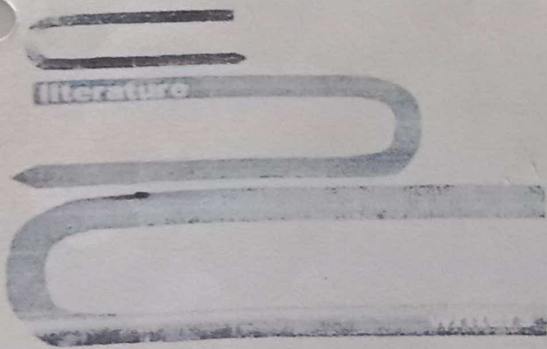
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**FEMINISTIC AND
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APPROACHES IN NEW
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Dr. K. A. AGALYA



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THE QUEST FOR IDENTITY IN BHARATHI MUKHERJEE'S *JASMINE*

P. Sujatha, Asst Prof of English, Mahendra Arts and Science College, Namakkal

In Indian English Literature there are 3 main themes, man in relation to nature, man in relation to men and man in relation to God. Novels played a very important role in the 20th century. The Women Writers are Anita Desai, Anita Nair, Shashi Deshpande, Manju Kapur, Bharathi Mukherjee and Jhuma Lahiri

Bharathi Mukherjee was born on July 27, 1940 in Calcutta, India. In 1947 she moved to Britain with her family at the age of eight and lived in Europe for about three and a half years before returning to India. After getting her B.A from the University of Calcutta in 1959 and her M.A in English and Ancient Indian culture from the university of Baroda in 1961. She came to the united state she got awarded a scholarship from the university of Iowa, she earned her M.F.A (Master of Fine Arts) in Creative Writing in 1963 and her PhD in English and Comparative Literature in 1969. While studying at the university of Iowa, she met and married a Canadian student from Harvard, Clark Blaise. She has produced two books with her husband, as well as numerous books, essays and short stories of her own.

In 1988 She won the National Book Critics Award for *The Middleman and other stories*. Mukherjee's career as a professor and her marriage to Blaise Clark has given her opportunities to teach all over the United States and Canada. Currently she is a professor at the university of California, Berkeley.

Her novels are *The Tiger Daughter*(1971), *Wife*(1975), *Jasmine*(1989), *The Holder of the World*(1993), *Leave It to Me*(1997), *Desirable Daughters*(2002) and *The Tree Bride*(2004). Her Short Story collections are *Darkness*(1985), *The Middleman and other stories*(1988) and *A Father*. Her Non-Fictions are *The Sorrow and the Terror: The Haunting Legacy of the Air India Tragedy* (1987, with Clark Blaise), *Political Culture and Leadership in India* (1991), *Regionalism in India Perspective* (1992).

Bharathi Mukherjee deals with the Phenomenon of Quest for Identity, her emphasis being on her female characters, their Psychological trauma and their final emergence as self assertive individuals free from the bondage imposed by relationships of the past. Mukherjee excels in depicting cross cultural and psychic consequences of search for self identity. Her heroines endeavor for self realization and finally take control over their destinies. In this novel, Jasmine is the female protagonist of Mukherjee, pass through tortuous physical, mental and emotional agony, which effects their entire personality largely turning them into a whole new being. In a patriarchal society, women find themselves in shackles of oppression and suppression women can only dream of liberation of their male counterparts consider them importance in uplifting the

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