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In the ever-evolving landscape of knowledge, research serves as the engine that propels us forward. It is through the tireless efforts of inquisitive minds that we challenge existing paradigms, uncover hidden truths, and illuminate new paths for progress. Here at M V Muthiah Government Arts College for Women, Dindigul, we are deeply committed to fostering a culture of research excellence, where exploration and discovery are not just encouraged, but celebrated.

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Therefore, on behalf of the entire college community, I extend my heartfelt congratulations to all the authors whose research features in this edition of our journal. Your dedication, meticulous work, and pursuit of knowledge are truly commendable. May your contributions continue to illuminate the path forward, leaving a lasting legacy in the annals of academic achievement.

Dr.L.REVATHI
PRINCIPAL

MESSAGE FROM THE EDITOR-IN-CHIEF

Share your knowledge; it's a way to achieve immortality!

-Dalai Lama

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At this juncture, on behalf of Editorial Board I am much delighted to congratulate all the research article Contributors for their meticulous work, which constantly thrive upon high quality of research.

I owe a heartfelt thanks to the Reviewers (Subject Experts) across disciplines for their time bound commitment. Indeed much indebted to the Reviewers for having been spent their valuable time towards this academic endeavour.

I extend my sincere thanks to Dr.L.Revathi, Principal of the college for being source of guidance and inspiration. Your mentorship and willingness to listen have made to explore the potential and to discover the passion of the Researcher.

Dr.K.M.Sumathi
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Materialising Nanocellulose - A Potential Sustainable Material of the Future- A Review

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Abstract

The rising environmental concerns due to the excessive usage of petroleum-based materials have driven research for sustainable, renewable, and biodegradable products. Cellulose is one of the most abundant natural polymers, extracted mainly from plants, tunicates, bacteria, and algae. Nanocellulose has the remarkable properties such as low density, biodegradability, and non-toxicity; along with great mechanical and thermal stability, self-assembly in aqueous dispersion media, reinforcing capabilities and long-lasting nature. This paper gives a review on nanocellulose and materising them for different application.

Key words: Cellulose, Nanocellulose, Sustainability

Introduction

Cellulose is one of the most abundant natural polymers. It is abundantly available in woody and non-woody residues. Large amount cellulose is present in the residues of both woody and non-woody plants [1]. Bio-nanostructure of cellulose can be obtained from cellulose extracted from various natural sources, such as plants, algae, small marine animals (tunicate), straw (rice), seeds (cotton), cane (bamboo, bagasse), and some bacteria.

It has been discovered that the cell walls of some algal species, including Rhodophyta, Phaeophyceae, Dinophyta, and Charophyceae, contain cellulose, which is primarily present in Iα

form [2]. Similar to plant cellulose, tunicates' cellulose is predominantly found in the Iβ form of cellulose [3].Bacteria are the source of bacterial cellulose, with Acetobacter xylinum being the most productive. High crystallinity, elastic modulus, and degree of polymerization are characteristics of bacterial cellulose. Compared to amorphous cellulose, it has ordered crystalline domains that are more resistant to mechanical, chemical, and enzymatic treatments; these crystalline regions are stabilised by hydrogen bonds, which also reduce cellulose's solubility in water and other solvents.

Different factors including effective surface area, crystallinity, and mechanical strength alter when the size decreases from micrometres, as in cellulose polymer chains, to nanometers, as in nanocellulose. As a result, cellulose synthesised at the nanoscale has superior qualities to cellulose [4].

The cellulose supply, the concentration of mineral acid, the length of treatment, and the temperature of hydrolysis are all significant factors that affect the size and structure of the nanocellulose. The presence of hydroxyl groups on the surface, surface area, aspect ratio, crystallinity, and mechanical properties of cellulose nanocrystals are the primary determinants of their attributes [5]. The cellulose nanocrystals' strength, stiffness, and crystallinity are provided by the robust inter- and intra-chain hydrogen bonds. The market for nanocellulose was valued at $291.53 million in 2019 and is expected to grow at a thrilling rate of 19.9% to reach $1,053.09 million by 2027[6].

Pre-Treatments of Cellulose Sources

The main technique used to break down the lignocellulosic biomass's interior tissues and cell walls through biochemical conversion processes is pre-treatment [7]. Internal structures are upset by this treatment, which also creates an opening for additional therapies. Therefore, during the pre-treatments, the cellulose sources are amenable to size reduction, structural modification, increased crystallinity, and improved swelling capacity in water [8].

Pre-treatments fall into three categories: chemical, biological, and physical. Mechanical, pyrolysis, sonication, microwave radiation, and spray drying are examples of physical pre-treatments [9]. As mechanical pre-treatments, three distinct techniques are typically used: grinding, chipping, and milling. To bring the particle size down to a few millimetres, chipping is done. While the particle size is reduced to 0.2 mm by the high shearing forces generated by milling and grinding techniques, a consistent size distribution is provided. The type and duration of milling processes used determine the specific surface area, degree of polymerization, and crystallinity of the nanocellulose [10]. Plant fibres can be made smaller by using a variety of milling techniques, including dry, wet disc, and vibratory milling. Because mechanical treatment is both economically feasible and produces no harmful by-products, it is a reasonable choice for a pre-treatment. The biological method consists of picking, enzymatic therapy, fungal action, and bacterial treatment. Hemicellulose and lignin are the results of the biological treatments. Alkali pre-treatment and bleaching are the two primary chemical pre-treatments used for cellulose extraction. Among the chemical pre-treatments employed are carboxymethylation, carbonylation, alkali treatment, acid hydrolysis, sulfonation, and quaternization. Defibrillation is aided by the large shearing pressures that the mechanical treatment imparts to the cellulose bundles [11]. High-pressure homogenization, microfluidization, micro grinding, steam explosion, cryo-crushing, and high-intensity ultrasound are among the mechanical treatments employed for nanofibrillation. Nanocellulose is highly hydrophilic and amenable to modification through a variety of chemical and physical techniques due to its abundance of hydroxyl groups (-OH) that can form hydrogen bonds either intramolecularly or between different chains . Its hydrophilicity may occasionally be a disadvantage, particularly in situations where humidity may be an issue. Chemical changes to hydroxyl groups are frequently made to reduce nanocellulose's hygroscopicity [12]. Because of their high reactivity, the hydroxyl groups can be altered through surface chemical functionalization, which enhances the compatibility of the nanocellulose with the non-polar polymer matrix.

Materilising Nanocelluose

Ming et al. synthesised nanocellulose that was separated from cotton stalks using acid hydrolysis. The findings using FTIR, AFM, XRD, and TA, demonstrated the smooth surface and rod-like forms of nanocellulose. The interior chemical linkages of cellulose macromolecules were impacted by the acid hydrolysis, particularly the (3)-OH and (5)-OH bonds. Decrease in particle size caused hydrogen bonds to break and reunite. Thermal characteristics were influenced by nanocellulose size. When the size of the nanocellulose particles was reduced, the overall thermal property dropped [13].

Al-Hagar and Abol-Fotouh [14] used an economical technique to synthesise bacterial cellulose from Komagataei bacterhansenii KO28. Using this technique, the scientists exposed the bacterial strain to varying levels of gamma radiation. After 10 days of incubation, the bacteria strain subjected to 0.5 kGy of gamma radiation twice (low dosage) yields the maximum, or 475% more than the control culture. The properties of the synthesised nanocellulose were also examined, and they matched those of the control nanocellulose.

Using nanocellulose and extract from mango leaves, Bastante et al. [15] created bioactive films by using Super-critical impregnation technology or solvent casting were used to create the bioactive films from extract of mango leaf. Since the extracted mango leaf has antibacterial and antioxidant qualities, the nanocellulose films that were made have antimicrobial characteristics against both Gram-positive and Gram-negative bacteria, including Staphylococcus aureus. In addition to their antioxidant and antibacterial qualities, the films made using super-critical impregnation technique have strong UV light barrier qualities, which helps to preserve food better for longer periods of time. In an effort to substitute hazardous dyes, scientists have recently started experimenting with biomaterials like cellulose or modified forms of cellulose [16].

Acid-hydrolysis was used to recover nanocellulose from water hyacinth. Hydrogels were recovered from nanocellulose when treated with urea and NaOH. Afterwards, borax was applied to the hydrogels to create crosslinked hydrogels. The crosslinked nanocellulose's SEM morphology revealed a more porous structure. The uncross-linked hydrogels displayed a swelling ratio of 325.2%, but the cellulose hydrogel crosslinked with borax exhibited a swelling

ratio of around 900% because of the borax's increased generation of OH groups on the crosslinked nanocellulose. Because there were more OH groups and a higher degree of polymerization in the crosslinked nanocellulose, there was also an increase in the water content and gel fraction. When it comes to antibacterial efficacy against Gram-positive bacteria (S. aureus), the crosslinked hydrogels also demonstrated a respectable degree of thermal stability (the majority of thermal breakdown happens between 250 and 400 °C) and transmittance [17]. Consequently, a highly adsorbent hydrogel derived from nanocellulose was created, which may find use in flame-retardant coating, agricultural applications, and wound dressing.

Using acid hydrolysis, Abdelaziz et al. [18] wastepaper was converted into nanocrystals, which were then utilised to make hydrogels by adding epichlorohydrin as a crosslinker. The nanocrystal hydrogels are positively charged at lower pH and are negatively charged at higher pH. The electrostatic interaction provides the basis for the dye's specific adsorption onto cellulose. Because sulfonic groups are present, the acid red anionic dye exhibits great adsorption at lower pH values, according to the researchers. However, at higher pH values (alkali washing), the dye will desorb. The hydrogels' reusability was examined as well, and after four cycles, the dye removal percentage was cut in half as a result of the films' deterioration from alkali washing. Additionally, the kinetic characteristics of the dyes' adsorption were examined; pseudo-second-order and Langmuir isotherm models demonstrated good fit to the experimental data using azide dyes and a triazine-alkyne linker.

3D printed self-healing hydrogels were synthesised using oxidised cellulose nanofibers, chitin nanofibers, and carboxyl methyl chitosan by Heidarian et al. [19]. The formation of nanohybrid hydrogels was brought about by the imine crosslinks that were formed between the nanomaterials. Tannic acid (TA) and Fe III solution were added to the nanohybrid hydrogels to increase their impart conductivity. The gel demonstrated strong strain-sensing capabilities, good self-thinning qualities, up to 89% self-healing, and 100% self-recovery (in the absence of outside stimuli).

The impact of fibre length, orientation, fiber-fiber interaction, and loading direction on the mechanical characteristics of cellulose nanocrystals (CNC) films was investigated by

Shishehbor. The researchers found that the primary factor governing the mechanical properties is the interfacial strength (fiber–fiber contact) between the cellulose nanocrystals. Babi et al. successfully labelled the nanocellulose fluorescently without changing the cellulose's structure.

CNF was extracted from Eucalyptus globulus kraft pulp by Alves et al. [20] using three distinct techniques: (i) mechanical treatment by high-pressure homogenization; (ii) enzymatic treatment followed by mechanical treatment; and (iii) TEMPO oxidation followed by mechanical treatment. The researchers created films using either the solvent casting approach or vacuum filtering followed by hot pressing by combining separated nanocellulose with clay (sepiolite). When compared to solvent casting, the films made via filtering and hot pressing have higher Young's modulus and tensile strength. The researcher suggests using artificial films in place of plastics.

Nanocellulose films could be employed as the foundation material for flexible electronic devices.According to Uetani et al. [21], tunicate nanocellulose sheets have a thermal conductivity of 2.5 W/m K, which is higher than that of other polymeric films used in electronic devices. Flexible electronics based on cellulose were created by Fu et al. [22] using balsa wood (Ochroma pyramidale). After the hemicellulose and lignin were chemically removed from the balsa wood, it was compressed under high pressure to create a flexible, translucent wood film with an excellent modulus and strength. Before being turned into an amyloid/lignin-based carbon ink, the electron-spun lignin was carbonised into a conductive carbon fibre. The flexible, translucent wood film was then printed with the ink to create an electronic circuit. According to the researchers, the flexible electronics they developed are sustainable and favourable to the environment, making them suitable for use in applications like flexible circuits and sensors.

Yuen et al. [23] used bacterial nanocellulose to create ultra-thin biosensors. The circuit boards were effectively mounted on the nanocellulose using electroless plating and inkjet printing. The new circuit boards based on nanocellulose are recommended by the researchers for use in temperature sensor, electronics, and healthcare applications.

Carter etal. [24] created a CNF manufacturing facility that uses mechanical defibrillation technology to generate consistent CNF slurry. Subsequent CNF sheets were made using calendar or non-calendar procedures from CNF slurry. Because the calendared sheets have a minimal thickness, they are more transparent. Researchers that changed the slurry's solids concentration or adjusted the knife applicator's height saw differences in the films' transparency. Ethylene oxide was used to further sterilise the nanosheets so they could be used as animal implants in mice and non-human primates.It was noted that the animals treated with the nanosheet implants showed no signs of irritation or inflammation and were completely biocompatible.

Hence literature shows that nanocellulose prepared from various sources finds various applications in different such as food packaging, chemical industry as viscosity modifier, biomedicine and drug delivery, electrochemical devices, as mechanical reinforcement of matrices, and membrane filtration and environmental remediation [25, 26].

Conclusion

Nanocellulose is an attractive and high-value-added product. Nanocellulose is an excellent material with good biodegradability, antibacterial, antifungal, has good fire retardant, high tensile strength, mechanical robustness, low weight, high surface area, biodegradability, hydrophilicity, and tunable optical properties that has a broad range of applications from an industrial, technological, and academic perspective. It has unique characteristics makes it a promising sustainable material for commercial markets.

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Emergence of New Woman in Manju Kapur's *A Married Woman*

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Abstract

India is a "Multicultural Postcolonial Nation". In a nation like India, culture manifests itself within the multiple contexts of caste, religion and class. Postcolonial literature has its impact on every aspect of literature, theme, characterization, language and so on. It can be identified by its discussion of cultural identity. The main theme of postcolonial women writers is the interplay between 'gender identity' and national identity. Women want to carve out an identity for themselves and make some space in strange places. In postcolonial literature space and place occupy a vital role in the society for women. Empowered women not only help in bringing gender equality but these women also help the society to lay a necessary foundation for a world that has equal economic, peaceful and healthy environment. The works of Manju Kapur offer a compelling case for an equitable society in which women are valued and acknowledged in all walks of life. The restrictions in post on women by patriarchal society must be lifted. The secondary standing of women in society is a result of patriarchal, paternalistic, and moralistic laws and regulations.

This paper aims to investigate the female psyche in Manju Kapur's *A Married Woman.* Also it examines the fascinating, unique pattern of development of the 'New Woman' as it is depicted in Manju Kapur's fiction. Her protagonists defiantly oppose the patriarchal society, shattering the myth of the submissive wife, selfless mother and holy woman. Her female characters stand up to challenge the male dominated society's fictitious moral code. It displays

women's feelings and introspective thoughts. The female characters created by Manju Kapur communicate self-identity and self-evaluation. Different facets of female characters give rise to feminist perspectives. Their lives become increasingly gloomy and unclear. In order to claim their identity and find fulfillment and self-satisfaction in their life, they stomp and resist the demands and limitations of patriarchy.

Keywords:- Quest, Marriage, New Woman, Patriarchy, Feminism.

Manju Kapur's novels reveal how modernity's excesses have resulted in a hollow modern society and way of life. Being one of the most influential writers in India, she has pushed for the advancement of women's strength and empowerment. She has written six great novels, namely *A Married Woman, Custody, Difficult Daughters, Home, The Immigrant* and *The Brothers*. Besides these novels, Kapur has written short stories- *The Necklace, The Birth of a Baby, The Power Behind the Shame and Speaking up* for Inter-Community and Cross Marriages.

The idea of 'New Woman' surfaced in the late 19th century. The term 'New Woman' was first used by an Irish writer named Sarah Grand in her famous article The *New Aspect of the Woman Question* published in March 1894 in the North American Review. New woman in her article referred to independent women who exerted their autonomy in the domestic and private spheres of life. After that this term has been used for a woman who fights oppressive social conventions to gain autonomy and self-fulfillment. Menon rightly states, "Feminism is not about that final triumph, but about the gradual transformation of the social field so decisively that old makers shift forever"(222). Similarly, 'New woman' also represents a woman who is trying to bring equality in a society which has been male centered and male dominated. For a long time females have been made to work for males gratification. This inequality is so deeply ingrained that we are just able to scratch the surface. Still a very small fraction of women in the society have truly accessed power to be independent of male domination. Looking back to the days when women were restricted to their homes can help us understand how women's status has changed over time.

All women who have made the decision to assert their moral authority are seen as 'New Woman.' These women's traits are complex and multifaceted. The face of a new woman changes along with societal norms. Vijayalakshmi Seshadri writes about the new women's fiction,

> Women have to their credit a whole series of literary achievements over the last ten to twelve years, and the fact that these creative activities have extended to the urban middle class will hopefully result in an increased literary output. However, it is even more important that they should entail corresponding changes in the audience and the critical scene so that the new woman and her portrayal in literature will find adequate acceptance. (180)

We can see confidence in contemporary women to strive for success regardless of any challenges that they may face due to guardians of patriarchy.

According to Indian tradition, a woman must defer to her husband in every possible respect. She must make the marital home pleasant for him. She has to take care of the kids, prepare the meals, and clean up after herself. She has to submit to her husband's demands without question and never inquire about money. But what happens when the woman no longer feels that her life should be decided in such a limited way, and the outdated customs lose their influence? Manju Kapur's captivating second book, *A Married Woman*, revolves around this idea as its main character, Astha Vadera, experiences significant transformations against the backdrop of a changing India. Astha is an educated, upper middle-class, working woman in Delhi.

Astha is chained by her middle-class values where she wants to uplift herself to upper class, but is always afraid of failing down to lower class. Her first encounter with Bunty and then with Rohan, fails because of her middle-class status and she accepts her fate and goes for arranged marriages where she plays the role of a typical Indian housewife but very soon gets frustrated in waiting for her husband after the work and taking care of children and in-laws. Astha is born and brought up in a traditional middle-class family. Her parents are very conscious of her needs and role in a middle-class family. Her mother is very protective of her and she expects her to conform to traditions. She often tells Astha that "The real meaning and worth of a

woman lies in getting married happily and having children and serving husband as a god" (75). She tells Astha: "When you are married, our responsibilities will be over. Do you know the shastras say if parents die without getting their daughter married, they will be condemned to perpetual rebirth?" (1). It is important to note that Manju Kapur allows the patriarchy to operate through the mother. Through her novel *A Married Woman*, Kapur works tirelessly to dispel this skewed and entitled perception of women, whose demands for equality and freedom have gone unanswered in the patriarchal society. Women are consequently deprived of the ability to act and make their own decisions, remaining purely in the realm of imagination, a fantasy to be dreamed and treasured. This novel offers a fascinating glimpse into the workings of a woman's mind as she struggles to come to terms with her identity in the society. Astha is such a person who is in search of her identity and the one who could be helpful to her in her pursuit. She forges many relationships with different persons.

> She represents the whole woman race, the changing Indian society where the upper-middle-class educated woman who, although financially independent, is still facing the problems of adjustment between the old and the new, between appearance and reality and between theory and practice. It explores the space of such women through Astha and boldly presents a new perspective. (97)

Manju Kapur bases the narrative on the idea that women in today's society are in a unique position and they stand on the precipice of social change. This novel gives voice to women's frustrations, disappointment, and alienation in a patriarchal world. This book makes us consider how Astha, a married woman searching for her identity, expresses her disapproval of the patriarchal system in place and grows into an independent woman. Amar Nath Prasad observes in this context: "Women are no longer flowers of the pot for only decoration; rather they are fragrant flowers of the open garden diffusing aroma to all comers, braving the storms and rains" (98).

Brought up in such an atmosphere, Astha "was well trained on a diet of mushy novels and thoughts of marriage" (8), which give her the wings to search for a boy friend. Bunty is the first object of her crush. "Away from him her eyes felt dry and empty. Her ears only registered

the sounds of his voice. Her mind refused to take seriously anything that was not his face, his body, his feet, his hands, his clothes…" (8-9).

Astha remains absorbed all the time in thinking about him and begins to perceive her future in him. She has to start a different life after her marriage with Hemant. Thinking of achieving her true soul-mate, Astha felt complete in the role of an ideal wife and ideal daughter-in-law. Astha's marital life was unexpectedly good, full of love and passion and she felt her husband to be the best person in the whole world, so much so that she kept hidden her thought that "she longed to dissolve herself in him, longed to be sips of water he drank, longed to be the morsels of food he swallowed" (46). Her mental state reveals the psychology of a typical Indian girl for whom a happy marriage happens to be the greatest achievement in life.

Astha does not realize that a man could not always love. Deliberately she lets herself being treated as a tamed pet rather than an individual woman with self-respect whose involvement with the outside world is as important as her man's. She did not mind him ignoring her discussion of her job with him, for she was just living to enjoy the full bliss of her conjugal life. It was the central thing in her life. So far her husband loved and so far her corporal lust was satisfied, she would not consider anything else. In marriage the woman is always subjugated when it comes to the call of the flesh and blood. Like a common woman, Astha limits her world to her room where she enjoyed the bliss and for which she waited throughout the day even while working in the school or at home.

The denial of dignity and the blame of being irresponsible towards her family kept Astha in perpetual mental turmoil, which goes parallel to the political and religious turmoil nationwide. It is in this scenario that Astha meets Pipeelika Trivedi. The feeling of betrayal on discovering the traces of her husband's infidelity in his tour luggage made Astha justify her own relation with Pipee. Her closeness to Pipee made Astha communicate with her very easily and on all levels. She felt comfortable in her relation with Pipee and no one suspected their relation. While she is with Pipee, she worries about the children and wonders how they would be managing without her. Astha's search for soul-mate finally culminated in Pipee. If a husband and wife are one person, then Pipee and herself were even more so, she reasoned. She had revealed aspects of

herself that she had never before revealed. "Both forget their personal anguish and agony. Both gain inner strength from women's liberation. Both fulfill female bonding in passionate fantasies and love making" (19). She felt complete with her.

Although Astha finds herself trapped between the pressures of family life and social norms, she makes daring decision about her life. By portraying the inner subtleties of a woman's mind, Kapur demonstrates a mature understanding of the female psyche, the feeling of inferiority, and how she bravely and honestly confronts her male counterparts on a daily basis with reason and logic. Values are changing, and women are beginning to recognize their equality with men. In today's social environment, the lofty ideals of feminism have been swept aside, but man and woman still have a structured interdependent relationship. However, the woman must continue to strive for her freedom rather than accepting her fate. The idea of gender equality is still unreal.

Thus, Kapur shows how gender roles are rigid in our society and thus checking the freedom of disadvantaged gender. She successfully sprays light over inequality of gender roles in Indian Marriage Institution. The gender roles are assigned for male and female according to the prevalent social norms of particular society.

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பாரதியும் மருதகாசியும்

செள. சுருதி[1] மற்றும் அ. வளர்மதி[2]

[1]பகுதி நேரமுனைவர் பட்ட ஆய்வாளர், அருள்மிகு மீனாட்சி அரசினர் மகளிர் கலைக்கல்லூரி, மதுரை – 2

[2]நெறியாளர், உதவிப்பேராசிரியர் , அருள்மிகு மீனாட்சி அரசினர் மகளிர் கலைக்கல்லூரி, மதுரை – 2

கலைமகளின் அருள் பெற்ற உன்னதக் கவிஞர் பாரதியார். தம்முடைய தேசத்துக்கு தேசிய உணர்ச்சியை உண்டு பண்ணும்நோக்கத்திற்காகவும்,பெண் கல்வி, பெண் விடுதலை, பொதுவுடமை கருத்துக்கள், தீண்டாமை, ஆன்மீகக் கருத்துக்கள் ஆகியவற்றை மக்களுக்கு எடுத்துரைக்கும் வகையில் கவிதைகளை வடித்துள்ளார். பாரதியாரின் கவிநயத்தை ஒரு கட்டுரையில் விளக்குதல் என்பது இயலாத ஒன்று. ஏனெனில், இயற்கையில் உள்ள அழகு, பசுமை, இனிமை என்று அனைத்தையும் ஒன்று திரட்டி பராசக்தியிடம் காணிநிலம் கேட்ட கவிஞன்.

மரபிலக்கியச் சாயல்களையும் தமிழ் மண்ணின் பெருமிதங்களையும் திரையிசைப்பாடல்களில் வெளிப்படுத்திய மகத்தான பாடலாசிரியர் 'திரைக்கவித் திலகம்' கவிஞர் மருதகாசி பாடல்கள். நாடகத்திற்குப் பாடல்கள் எழுதிக் கொண்டிருந்த அ.மருதகாசி தமிழ்த் திரையுலகில் இரண்டாம் தலைமுறை பாடல்கள் 1949ஆம் ஆண்டு எழுதவந்தார். திரையுலகிற்கு வந்த பிரபலமான பாடலாசிரியராக தனக்கெனத் தனி முத்திரையைப் பதித்து கொண்டவர். பாரதியார் மற்றும் அ.மருதகாசி இவ்விரு கவிஞர்களின் கவிதைகளின் கருத்துக்கள் ஒருமித்து பயணிக்கும் வரிகளை ஒப்பியல் முறையில் ஆய்வு செய்வதாக இக்கட்டுரை விரிவடைகிறது.

தேசமும் நேசமும்

எமக்குத் தொழில் கவிதை இமைப்பொழுதும் சோராதிருத்தல், நாட்டுக்கு உழைத்தல் என்ற பாரதியின் சமூகப்பார்வை விசாலமானது. ஊருக்கு உழைத்தலை தனது சிந்தையில் கொண்டு நேர்த்தியாக உழைத்தவர். தேசத்தின் மீது அதிக காதல் கொண்டு தன் கவியை புனைந்த முண்டாசுக்கவியை போலவே தனது கவிதைகளில் விடுதலை பெற்ற பிறகு நமது தேசத்தைப் பற்றிய கனவுகளை வரிகளாய் வடித்தவர் கவிஞர் மருதகாசி அவர்கள்.

பாரதி தனது நாட்டின் மீது கொண்ட பற்றினால் இப்பார் அறியும் வகையில் கவி புனைந்துள்ளார்.

"முப்பது கோடி முகமுடையாளுயிர்

மொய்ம்புறவொன்றுடையாள்- இவள்

செப்பு மொழிபதினெட்டுடையாள்எனிற்

சிந்தனை ஒன்றுடையாள்"[1]

பல கோடி மக்கள் தொகையினை உடையவள். பல மொழிகளுக்கு பிறப்பிடமாக உடையவள். இருப்பினும், நமது தேசம் பாரத தேசம் என்ற ஒரே சிந்தனை கொண்டிருப்பவள் என்று கூறுகிறார். தாய் நாட்டின் சிறப்பை உணர்த்தும் விதமாக மற்றொரு கவிதையில்,

"பாரத நாடு பழம்பெரும் நாடு

நீரதன்புதல்வர்இந்நினைவகற்றாதீர்....

என்றும் மன்னும் இமயமலை யெங்கள் மலையே

மாநிலம் மீதிஇதுபோல் பிரிதில்லையே"[2]

என்று தாய்த்திரு நாட்டை நேசித்து கூறுகின்றார். பாரதியின் வழியில் கவிஞர் மருதகாசி தனது கவிதைகளில் வெளிப்படுத்தியுள்ளார்.

"சண்டையின்றி யாவரும் ஒன்றுபட்டுவாழ்வோம்

அண்டை நாட்டு மக்கள்தம்மைஅன்பினாலேவெல்வோம்

நெஞ்சில் நேர்மை,ஈரம்,அஞ்சிடாதவீரம்

சொந்தங் கொண்டு வள்ளலாக வாழ வேணும் யாரும்

வாழ்க நமது நாடு" [3]

வேற்றுமைகளின்றி ஒற்றுமையுடன் வாழவேண்டும். அன்பால் இந்த உலகத்தை வெற்றிக்கொள்ள முடியும் .நேர்மையாக எதற்கும் அஞ்சாத வீரத்தோடு நம் வாழ்வினை வாழ வேண்டும். இவ்விரு கவிஞர்களுக்கும் தேசம் எப்போதும் ஒற்றுமையாக இருப்பதன் வாயிலாக நல்லறங்கள் வளர்ந்தோங்கி உலக நாடுகளுக்கு முன்மாதிரியான நாடாகத் திகழும் என்ற கருத்தினைச் சிந்தையில் கொண்டு செயல்பட்டதை இவர்களின் கவிதைகள் வெளிப்படுத்துகின்றன. தேசப்பற்று போன்றே இக்கவிஞர்களின் மாநிலத்தின் கொண்ட பற்றும் சிறந்து விளங்குகின்றனர் என்பதை பறைசாற்றும் வரிகள் கீழே,

"காவிரி தென்பெண்ணை பாலாறு - தமிழ்

கண்டதோர்வையைபொருனைநதி - யென

மேவியயாறுபலவோடத் - திரு

மேனி செழித்த தமிழ்நாடு" [6]

ஆறுகள், வரலாற்றுச் சிறப்புகள் மற்றும் சான்றோர்கள் பலர் பிறந்த தமிழ்நாடு என்று தமிழ்நாட்டில் பெருமையினையும் அடுக்கிக் கொண்டே செல்கிறார் பாரதி.

"கண்ணிலே கனிவிருக்ககருத்திலேதுணையிருக்க

எண்ணத்தால்உயர்ந்தவங்கசீமையிது- உலகில்

எந்நாளும் பொன் விளையும் பூமியிது" [7]

வந்தாரை வாழவைக்கும் தமிழகம் என்ற கூற்றை தன் கவிதையின் மூலம் உரக்கச் சொன்னவர் கவிஞர் மருதகாசி அவர்கள் .மேலும்,

"அநியாயம் செய்பவரை அஞ்சாமல் எதிர்த்து நின்று

தன்மானம் காத்துவரும்சீமையிது- பெற்ற

தாயாகும் பொன் விளையும் பூமியிது" [8]

வாழ்விழந்து வருபவர்களை வாழச் செய்பவர்கள் மட்டுமல்ல நேர்மைக்குப் புறம்பாக வாழ்பவர்களை எதிர்த்துப் போராடும் குணம் உடையவர்கள் என்பதை இவ்வரிகளில் மூலம் விளக்குகிறார் கவிஞர்.

பொதுவுடமை

பொதுவுடமை என்பது உயர்ந்தவர், தாழ்ந்தவர் என்ற வேறுபாடு இல்லாமல் சமுகத்தில் அனைத்து தரப்பினருக்கும் ஒன்றாக இருப்பது. மனிதன் சேர்ந்து வாழும் போதுவிட்டுக் கொடுத்தல், உதவி செய்தல் ,பொறுத்துக் கொள்ளுதல், அன்பு செலுத்துதல், பிறரை மதித்து பிறர் துன்பம் கண்டு வருந்துதல், தனக்கும் தன்னைச் சார்ந்தவர்களுக்காக உழைத்தல் போன்ற பொதுவான குணங்களே சமுதாயத்தில் சேர்ந்து வாழ்வதற்கான அடிப்படையாய் அமைகிறது. இறைவன் படைப்பில் அனைத்து இயற்கை வளங்களும், விளைச்சலும் அனைவருக்கும் பொதுவானவை.ஆனால் ஒரு சிலர் சொத்துக்களை குவித்து இது எங்கள் உடைமை என்று கூறி உழைக்கும்மக்களைப்பசியாலும்பஞ்சத்தாலும் தவிக்க விட்டுவிட்டு தான் மட்டும் உண்டு மகிழ்கின்றனர். இந்நிலை கண்டு பாரதியார் தனது கவிதையில்

"உழவுக்கும்தொழிலுக்கும் வந்தனை செய்வோம்

உண்டுகளித்களித்திருப்போரை நிந்தனை செய்வோம்" [9]

என்று கூறியுள்ளார்.

சமுதாயத்தைச் சீர்குலைய செய்வது இல்லாமை, கல்லாமை, தீமை இம்மூன்றும் அடங்கும். இல்லாமை மிகக் கொடியது .எனவே, வயிற்றுக்குச் சோறிட வேண்டும் என்பதை பாரதியாரின் அடி பின்பற்றி கவிஞர் மருதகாசி அவர்களும்

"வாயிருக்கும்எங்களுக்கும்வயிறிருக்கு

வாடுகின்றபசிப்பிணிதுயரிருக்கு

வாழ்வது உங்கையில்தானிருக்கு" [10]

இந்த உலகில் பிறந்த எந்த ஒரு மனிதனும் பசியால் வருந்தக் கூடாது. அவ்வாறு பசியால் வருந்தக் கூடிய சூழல் இருக்குமேயானால், அதற்குக் காரணமான இந்த உலகத்தையே அழித்து விடுவோம் என்பதை,

"இனி ஒரு விதி செய்வோம் - அதை

எந்தநாளும் காப்போம்

தனி ஒருவனுக்குஉணவில்லையெனில்

செகத்தினைஅழித்திடுவோம்" [11]

எனப் பாடியுள்ளார்.

பசியின் கொடுமையை அனுபவித்து உயிர் துடித்துச் சாகின்ற மக்களைப் பார்த்தபோது ஏற்பட்ட வலியினை கவிஞர் மருதகாசி,

"அந்தி வரையிலும் கஞ்சி கவலையே அறியா பெருங்கவலை

பொழுதானபின்னாலே தலையை சாய்க்கவேஇடங்கவலை

சந்துபொந்துகள் பாதையில் தூங்க சட்டம் இடந்தரவில்லை

சமத்துவம் என்பது வார்த்தையில் இருக்கும் வாழ்க்கையிலே இல்லை" [12]

என்ற வரிகளின் வழி வெளிப்படுத்துகிறார்.

கோடி வகை தொழில் செய்வோம்

எல்லோரும் ஒரு சுய தொழிலைக் கற்றுக் கொள்ள வேண்டும் .'கைத்தொழில் ஒன்றை கற்றுக்கொள் கவலை உனக்கில்லை ஒத்துக்கொள்' என்று நாமக்கல் கவிஞர் வெ இராமலிங்கம் அவர்கள் கூறியுள்ளார். பல தொழில்கள் செய்து நாம் நமது குடும்ப பொருளாதாரத்தை

உயர்த்துவதோடு நாட்டின் பொருளாதாரத்தையும் உயர்த்த வேண்டும் என்ற எண்ணம் கொண்ட கவிஞர்கள் கவியாக வடித்துள்ளனர்.

> "ஆயுதம் செய் வோம் நல்ல காகிதம் செய்வோம்
> ஆலைகள் வைப்போம் கல்விச்சாலைகள் வைப்போம்
> ஓதல் செய்யோம் தலை சாயுதல்செய்யோம்
> குடைகள் செய்வோம்உழுபடைகள் செய்வோம்
> கோணிகள்செய்வோம்இரும்பாணிகள்செய்வோம்" ¹³

இந்தியா அனைத்துப் பொருள்களையும் தயாரிக்க வேண்டும். அதன் மூலம் பொருளாதாரத்தில் தன்னிறைவு பெற்ற நாடாக மாற வேண்டும். உழவிலும், தொழிற்சாலை அமைத்து சிறப்பாகச் செயல்பட வேண்டும் .நம் நாடு தன்னிறைவான நாடாகும் வரை ஓய்வு இல்லை சோர்வும் இல்லை என்கிறார். அதனையே,

> "ஏர்முனைக்கு நேர் இங்கே எதுவுமே இல்லே
> என்றும் நம்மவாழ்விலேபஞ்சமேஇல்லே!..." ¹⁴

என்கிறார்.

மனிதன் ஆரம்ப காலத்திலேயேஉழவும், கைத்தொழில்களும் கால வளர்ச்சிக்கு ஏற்ப மாற்றங்களையும்வளர்ச்சியும் பெற்று வருகின்றன என்பதை கவிஞர்கள் உணர்த்துகின்றனர்.

நினைவு தொலைத்தவர்கள்

அறம் பற்றிய செய்திகளை நமது இலக்கியம் அனைத்தும் போதிக்கின்றன. எண்ணம் தூய்மையாக அமைய முடியும் .எண்ணம் எழுவதற்கு இருப்பிடமாக உள்ள மனம் மாசு இல்லாததாக இருக்க வேண்டும். மனத்தின் மாசினைப் போக்குவதற்கு முயல்வதே அறமாகும். பொறாமை, பேராசை, வெகுளி, கடுஞ்சொல் ஆகியவை மன மாசுகளாகும். அவை இல்லாமல் இருப்பதே அறம் என்பதை வள்ளுவர்,

> "மனத்துக்கண் மாசிலன் ஆதல் அனைத்தறன்
> ஆகுல நீர பிற "

என்று கூறுகிறார். ஒளவையும் அறத்தினை நன்கு கற்க வேண்டும் என்பதை **'அறம் செய்ய விரும்பு'** என்று தனது ஆத்திச்சூடியில் கூறியுள்ளார் .ஆனால், பாரதி பல கவிகள் அறம் சார்ந்து எழுதியவர். சமூகத்தின் மீது ஏற்பட்ட அதிருப்தியை வெளிப்படுத்தும் விதமாக,

"கடமை புரிவார்இன்புறுவார்என்னும்

பண்டையக்கதைபேணோம்

கடமை யறிவோம் தொழிலறியோம், கட்டென்

பதனைவெட்டெனபோம்

மடமை, சிறுமை, துன்பம், பொய் ,வருத்தம் ,

நோவு மற்றிவை போல்

கடமை நினைவும்தொலைத்திங்குகளையும்

றென்றும்வாழ்குவமே"[15]

என்று பாடியிருக்கிறார்.

இந்தக் கருத்துக்கள் நமது இலக்கியத்திற்கு முற்றிலும் புதிய கோணத்தில் தனது சொற்களைத் தொகுத்துள்ளார். இக்கருத்தைப் போன்று கவிஞர் மருதகாசியின்,

"வெள்ளிப்பணத்துக்கும்

நல்ல குணத்துக்கும் வெகு தூரம் - இது

உள்ளபடி இந்த உலகம்

உணர்த்தும் ஒரு பாடம் "[16]

என்று பாடியுள்ளார்.

மூட நம்பிக்கைகள்

நம் நாடு வல்லரசுபாதையினை நோக்கி நடைபோடும் இன்றைய காலச்சூழலிலும் மூடநம்பிக்கைகளுக்கு குறைவில்லை என்று கூறினால் அது மிகையாகாது. கற்றவரிடத்திலும் கல்லாதவரிடத்திலும் பரவலாக மூட நம்பிக்கைகள் காணப்படுகின்றன. இந்த நம்பிக்கைகள் ஆதிக் காலத்திலிருந்தே வந்திருப்பதை பாரதியார் மற்றும் மருதகாசி கவிஞர்களின் கவிதைகள் மூலம் அறியலாம்.

நம்மக்கள் 'சூனியம், பேய், ஆவேசம் ,சாமியாடல் இவைகளை இன்றும் செய்து வருவது விந்தையாக இருக்கின்றது.

"வஞ்சனைப்பேய்கள்என்பார் - இந்த

மரத்தில் என்பார் அந்தக் குளத்தில் என்பார்

துஞ்சுவதுமுகட்டில் என்பார் - மிகத்

துயரப்படுவார், எண்ணிப் பயப்படுவார்" [17]

என்றும்,

"மந்திரவாதி யென்பார் - சொன்ன

மாத்திரத்திலேமனக்கிலிபிடிப்பார்,

யந்திர சூனியங்கள் இன்னும்

எத்தனை ஆயிரம் இவர் துயர்கள்!" [18]

கொடிய நோயால் பாதித்தவர்கள் முறையான மருத்துவ சிகிச்சை பெறாமல் வேண்டுதல்கள், தீர்த்தம் என்று தன்னுடைய உயிரை விடுகின்றனர் என்று தன்னுடைய கவிதைகளில் சாடியுள்ளார் பாரதியார். இதைப் போன்ற கவிஞர் மருதகாசி அவர்களும்,

"சாமி சாமி என்று உரை ஏற்கின்ற — ஆசாமி ரொம்ப இந்த நாட்டிலே

ஆருக்குந் தெரியாமல் பஞ்சமா பாதகம் அஞ்சாமல் தினம் செய்து

நீதியை உபதேசம் செய்யும் உலுத்தப் பயலும் பயலும் ஒருசாமி

ஆருக்கும் குடியல்லோம் நமனைஎன்று ஆர்ப்பாட்டம் செய்து

நேருக்குநேர் வெறும் நிழலைக் கண்டு நடுங்கும் நீசப் பயலும் ஒரு சாமி" [19]

என்ற வரிகளும் மூடநம்பிக்கையில் மக்கள் மூழ்கி தனது உடல், மனம், பணம், நேரம் அனைத்தையும் இழந்து விடுவதாகக் கூறுகின்றார் ஆசிரியர்.

இறைமையும் ஆன்மீகமும்

மனதில் தீய எண்ணங்கள் இல்லாமல் அடுத்தவருக்கு நல்லது செய்யாவிட்டாலும் கெடுதல் செய்யாமல் மனசாட்சிக்கு பயந்து வாழ்வது ஒருவகை ஆன்மீகம். உன்னைத் தவிர வேறு யாரும் தெரியாது: உன்னைத் தவிர வேறு யாரும் எனக்குக் கிடையாது: அனைத்தும் நீயாக இருக்கிறாய்! என்ற ஆன்மீக வாழ்வில் நமது சமய இலக்கியங்கள் நமக்கு பறைசாற்றுகின்றன.

"அறிவானும் தானே அறிவிப்பான் தானே

அறிவாய் அறிகின்றான் தானே - அறிகின்ற

மெய்ப்பொருளும் தானே விரிசுடர்பார் ஆகாயம்

அப்பொருளும் தானே அவன்"   (அற்புதத்திருவந்தாதி - 20)

என்று நமது இலக்கியங்கள் நமக்கு உணர்த்துகின்றன. அவ்வழியில் பாரதியும் கவிஞர் மருதகாசியின் தனது கவிதையில் பதிவு செய்துள்ளார்கள்.

"ஆதியாஞ் சிவனுமவன் சோதியான சத்தியுந்தான்

அங்கும்இங்கும் மெங்குமுள வாகும் - ஒன்றே

யாகினா லுலகனைத்தும் சாகும் - அவை

யன்றியோர் பொருளுமில்லை, அன்றியென்று மில்லையிதை" [20]

பாரதியார் தன்னுடைய கவிதைகளில் மூடநம்பிக்கைகளை சாடுகின்றாரே தவிர இறைவன் மீது நம்பிக்கை கொண்டவராகவே வாழ்ந்துள்ளார் என்பதை அவரின் கவிதை வரிகள் தெளிவுபடுத்துகின்றன. பெண் தெய்வங்களின் மீது மிகுந்த பக்தி உடையவராக வெளிப்படுத்துகிறது அவரின் கவிதைகள்,

"காளி மீது நெஞ்சம் - என்றும்

கலந்து நிற்க வேண்டும்

வேந்த ரேத்து புகழும் - பாரி

யாளி யொத்த வலியும் - என்றும்

இன்பம் நிற்கு மனமும்

வாழி யீதல் வேண்டும் - அன்னாய்!

வாழ்க நின்றன் அருளே" [21]

இறைவன் மீது கொண்டிருக்கும் சிந்தனை இரண்டற கலந்து வணங்க வேண்டும். தன் கவிதையில் வரங்கள் பல கேட்டு தனது கற்பனை சிறகுகளை விரிக்கின்றார். அவரின் கவிதைகளை வாசிக்கும் வாசகர்களின் கற்பனை உலகத்திற்கு திறவுகோலாக உள்ளார்.பாரதியார்

"பூமாலை வாடி இதழ் உதிருமென எண்ணியே

பாமாலை பைந்தமிழில் சூடிதின முன்னையே

அன்பால் வணங்கிடும் என்பால் உனதருள்

குன்றாத நெஞ்சோடு நன்றாய் வாழளனை கண்பாரும்" [22]

என்ற பாடல் வரிகள் மூலம் கவிஞர் மருதகாசி சிவன் மீது கொண்ட பக்தியின் அளவினை கூறுகிறார்.

தொகுப்புரை

பாரதியார், மருதகாசியின் கவிதைத் திறத்தால் பல தேசியப் பாடல்களை நாட்டு மக்களின் செவிக்கும் சிந்தைக்கும் கொண்டு வந்துள்ளனர். நாட்டு மக்களின் மனநிலையும், நாட்டின் நிலைமையும் கண்டு மனம் நொந்து வேதனைப்படுகின்றனர் என்பதை அறிய இயலுகிறது. சமூகச் சீர்திருத்த சிந்தனைகளை வலியுறுத்தும் கவிதைகளும் சமூகத்தை சாடும்

கவிதை வரிகளும் மக்களிடையே அறியாமையை அகற்றி ஒளியேற்றும் சிந்தனைகளை விதைக்கின்றன. அனைவரும் ஒன்றாகக் கூடிதொழிலைச் செய்ய வேண்டும் கைத் தொழிலை கற்றுக் கொள்வதால் நாடு முன்னேற்றத்தை நோக்கி நகரும். நியாயத்திற்கு மாறாக நடப்பது கொடுமை என்பதை இவ்விருகவிஞர்களும் தனது கவிதைகளின் வழியாக நமக்கு விளக்குகின்றனர்.

பார்வை நூல்கள்

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2. பொன். செல்லமுத்து (தொகுப்பாசிரியர்) – மருதகாசி திரையிசைப் பாடல்கள் - தொகுதி – 1 - மணிவாசகர் நூலகம்.

3. திருவள்ளுவர் - திருக்குறள் - நேஷனல் பப்ளிஷஸ்.

4. காரைக்காலம்மையார் - அற்பதத் திருவந்தாதி – அமுத நிலையம்.

Library Website Creation Using Wix Website Builder

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Abstract

In its endeavor of dissemination of information to its patrons, it has become inevitable for a library to have a website. And most libraries ignore this feature of the library due to the expense involved in employing a separate website for the library. But with the evolution of free website builders, having a website for the library has become a simple task that anyone can adopt without any expense of expertise required. This article defines the various features of Wix free website builder with a step by step guide showing how easy it is to create a library website using Wix.

Keywords: *Wix free Website builder, Library website, Features of Wix*

Introduction

A website is a collection of web pages and related content, published on a web server. With the emergence of website builders, one can establish an impressive website on your own. Using the professional design features of the builder, one can develop a professional website without any technical expertise and financial burden. Website builders are online tools provided by hosting companies for the development of websites without any manual code editing. Web builders are of two categories:

• Online tools provided by web hosting companies. Users can login and build their websites on their own. The site owner may also use alternative tools like content management systems.

• Application software used to create and edit webpages and the publish it on any host server. These are "website design application software", rather than "website builders".

• Top ranking experts in the field of technology Forbes, Techradar, PCMag, and websitebuilderexpert rank Wix.com as the No. 1 free website builder. The website builders are evaluated according to their popularity, features offered, marketing tools, help and support facilities, value for money, etc. Third party reviews are also evaluated in the ranking process.

Library Websites

A library website is a digital platform provided by a library to offer various services and resources to its patrons and the public online. It has become important for a good library to have a well developed website, which is a mirror of the library and meets the requirements of the library users in their search for information from the library. These websites typically serve several purposes:

1. Catalog Access: Users can access and search the catalog of the library's collection of books, e-books, and other resources.
2. Account Management: Library users can manage the renew books from the library, place holds, and check due dates.
3. Digital Resources: Users can access the digital resources like e-books, e-journals, and databases through the portal.
4. Event Information: Users can get information about events, programs, workshops, and exhibitions at the library.
5. Contact and Hours: Information about the contact details, location, working hours of the library are provided here.
6. Research Assistance: Most library websites provide help to users in research projects by providing tutorials, research guides, and related links.
7. Online Renewals and Reservations: Users can reserve books or renew borrowed items online.
8. Interlibrary Loans: Some libraries provide Inter-library lending facility through their websites.

9. Accessibility: Facilities like text to speech functions, screen readers, etc are provided by some websites to make it accessible to users with disabilities.

The features and content of websites of libraries vary but the aim of the websites will always be to provide its users access to its resources and services in digital format.

About Wix

Wix is an open-source cloud based web development portal. Wix is an online freemium platform where users can create websites. Whether building a personalblog, a portfolio, an online store, or a business website. Its intuitive interface and comprehensive features make it anidealchoiceforbothbeginners andexperienced userslookingto establish astrong onlinepresence. It offers tools for creating HTML5 websites and mobile sites using online drag-and-drop editing. Users can add applications for social media, e-commerce, online marketing, contact forms, e-mail marketing, and community forums to their web sites.

Account creation in Wix is simple as entering an email address and a password. You can choose the type of site you are looking for with a view of the purpose of the site – business, photography, designer, music, blog and so on. From there you journey into the creation of a website from scratch or can have Wix do it automatically for you.

Objectives

➤ To highlight the features provided by the Wix platform in creating a professional librarywebsite with ease, and low cost or no cost, and with no technical knowledge.

➤ To promote Do-it-yourself website builders and encourage librarians to have their own library websites.

Key features of Wix

• **Cloud platform**Wixoffersa cloud service that users can access from any browser, any device, any time.

- **Powerful editor** TheintuitiveDrag & Drop Wix editor helps you develop your website the way you imagined it to be. No manual coding required.

- **Wixtemplates**Wix offers more than 800 templates, offering your website a professional appearance.

- **Fast** it works very fast loading every element as in any professional website.

- **Blog** A user-friendly and simple dashboard helps you manage the blog.

- **SEO plan** Wixguides you to optimize your website for search engines by helping in creating your own your own SEO plan.

- **Wix ADI** artificial intelligence design facility automatically creates the site for you if needed..

- **Optimisation for Mobile** Though Wix creates mobile friendly website by default, the smartphone icon provided switches you to mobile editing view even though no additional work is needed to be done to make the site mobile friendly.

- **Includes hosting**By signing up in Wix you sign up for free storage space for the website to be hosted.

- **Freemium**Wixgives users access to the free basic web-development services. Wix also offers paid upgrades for more advanced options.

Steps for creating a website in Wix

Creating a library website using Wix is a straightforward process. Here are some steps to get you started:

1. **Sign Up on Wix**
   a. Go to the Wix website and sign up for an account if you don't already have one.

2. **Choose a Template**
   a. Wix offers a variety of templates. Select one that suits the theme and style you want for your library website.

3. **Customize Your Template**
   a. Use Wix's drag-and-drop editor to customize the template.
   b. Add your library's name, logo, and branding elements.

c. Create pages for different sections, such as Home, About Us, Catalog, Events, Blog, Contact, and more.

4. **Content Creation**

a. Populate your website with content.

b. Add information about your library, its history, mission, and services.

c. Create an online catalog with book listings, descriptions, and cover images.

d. Showcase upcoming events, news, and blog posts.

5. **User-Friendly Navigation**

a. Ensure that your website is easy to navigate.

b. Create a clear menu structure and use appropriate headings and categories.

6. **Integration**

a. If your library offers online services like e-books or digital resources, integrate them into your website.

b. Add a search function for the catalog, so users can find books easily.

7. **Engagement Features**

a. Consider adding features like a newsletter signup, contact forms, and a calendar for events.

8. **Mobile Optimization**

a. Make sure your website is mobile-friendly since many users will access it from smartphones and tablets.

9. **SEO Optimization**

a. Optimize your site for search engines. Use relevant keywords, meta descriptions, and alt text for images.

10. **Test and Publish**

a. Before publishing, thoroughly test your website for functionality and responsiveness.

11. **Publish Your Website**

a. Once you're satisfied with the design and content, publish your library website for the world to see.

12. **Promotion**

- Share the website link on social media, and consider using online and offline marketing to promote your library's digital presence.

Remember to keep your website up to date with the latest library information, events, and resources. Wix provides tools and resources to make this process relatively easy for users with little to no web development experience.

How to Create a Website Using Wix (Step-by-Step Guide)

o   **Browse to Wix.com and click the Get Started button.**
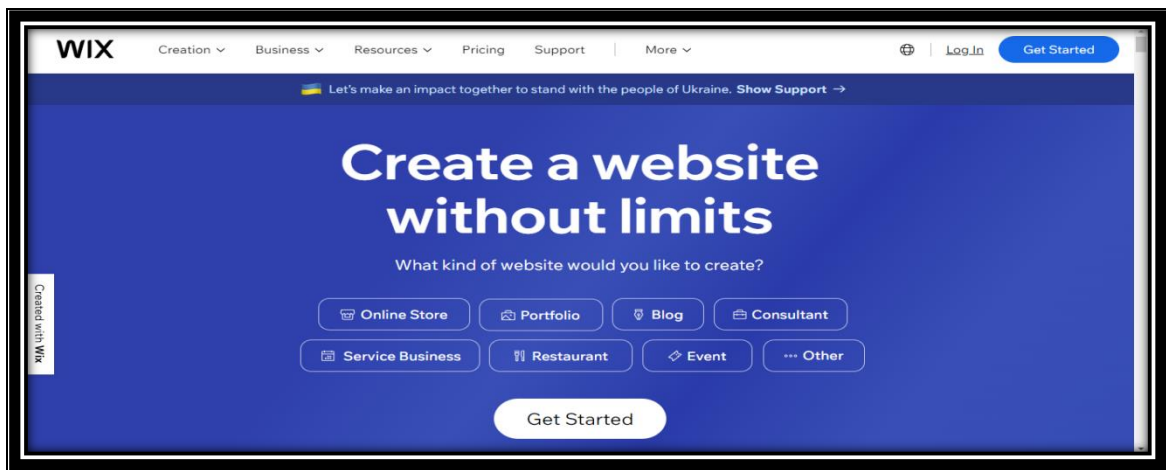
o   **Sign up for an account if you don't already have one.** 'Sign up' and create a new Wix account or sign up with your Facebook or Google account.
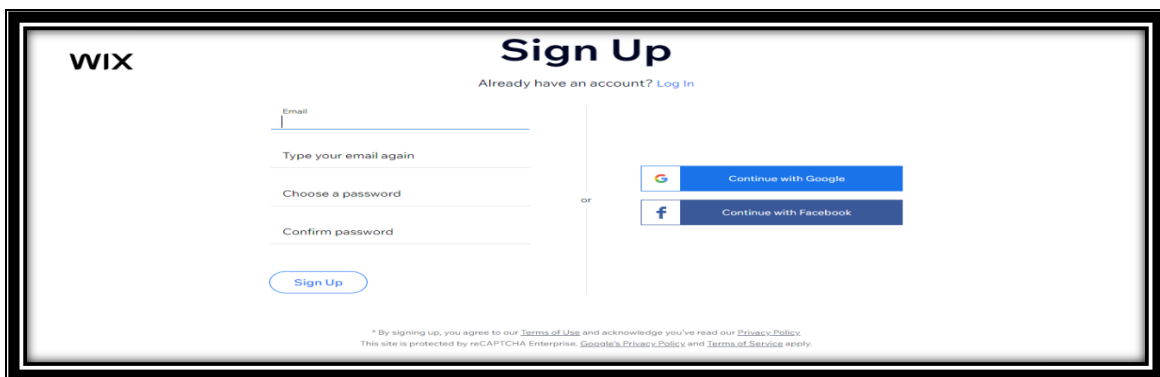
o   **Log in and go to the My Sites page and click Çreate New Site.**
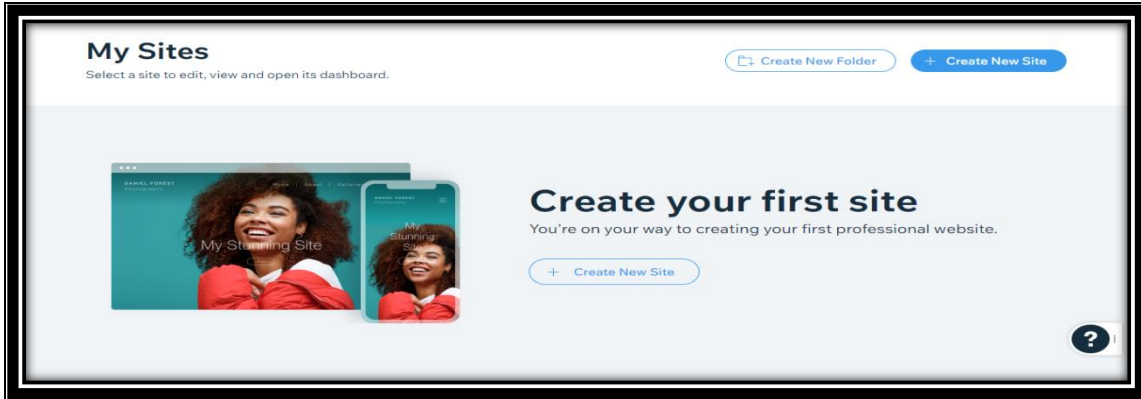
o   **To build a Library website type in in 'Library' and click Next**
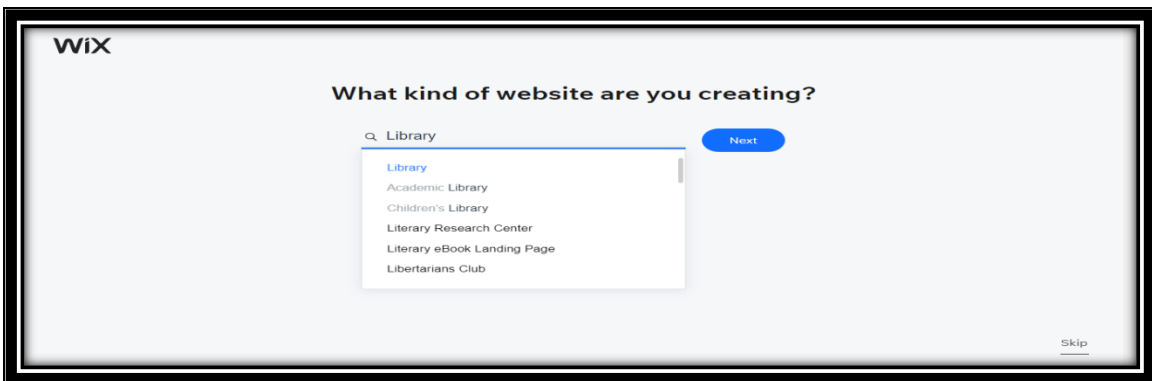
o   **Type in the name that you wish to give to your website and click Next.**
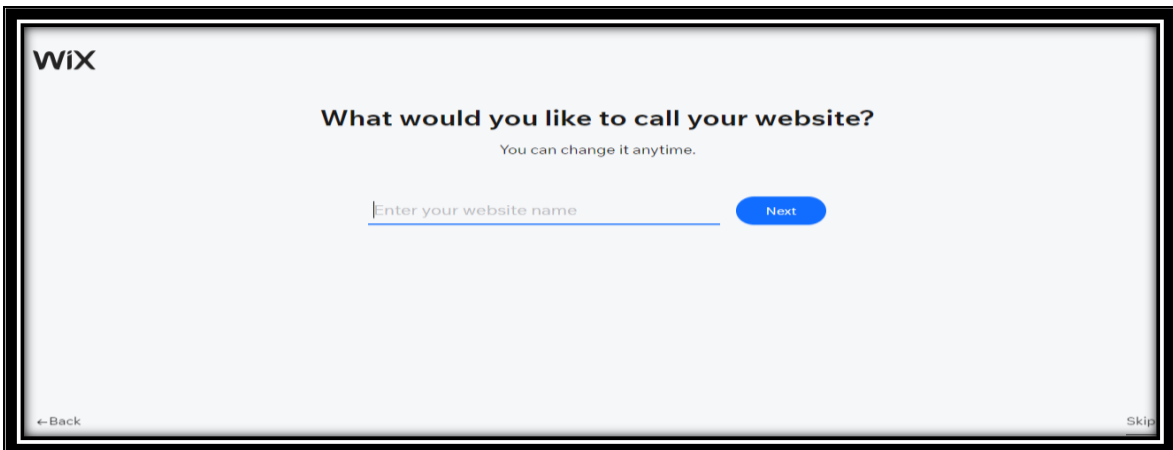
o   **Select the additional components you would like to be addedto your website and click 'Next'**
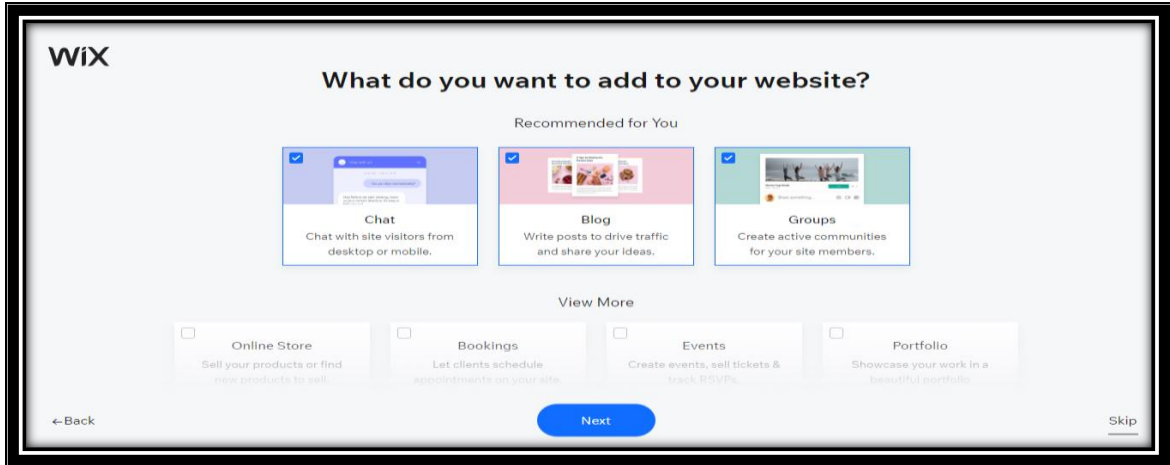
- **For simple website building, select 'Get a custom builtsite'**
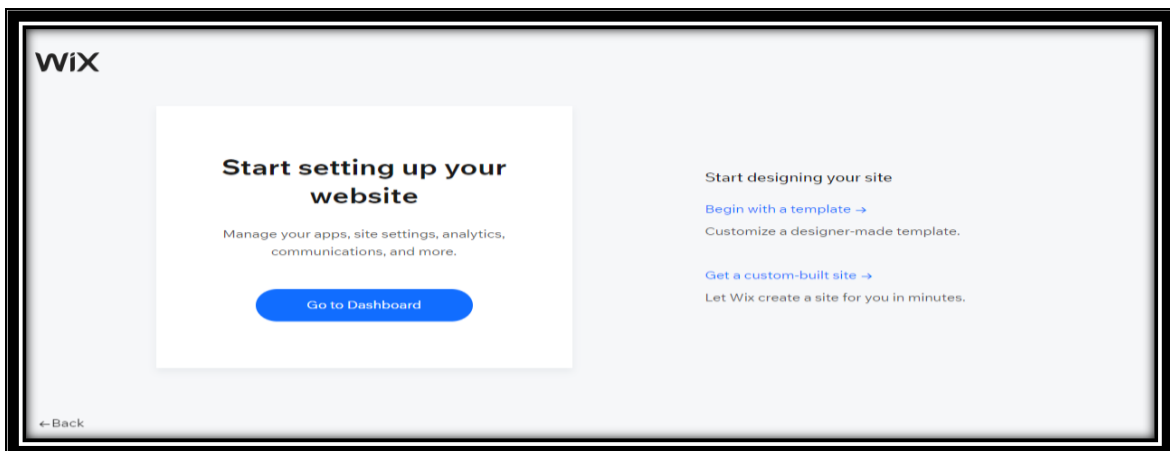
- **Review and site info such as logo, email, address, etc. and click 'Next'**
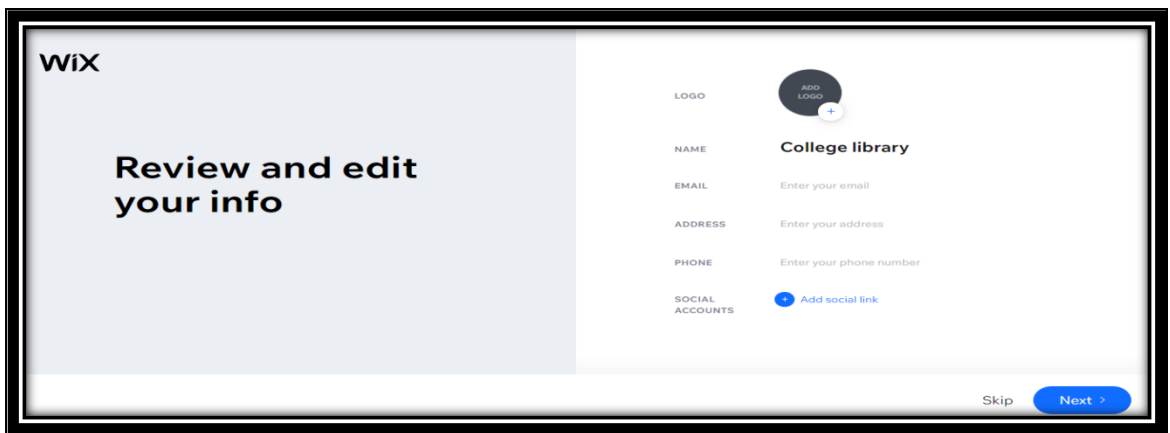
o   **Select a suitable theme and click 'Next'**

o   **Pick a design for the 'Homepage'and click 'Next'**
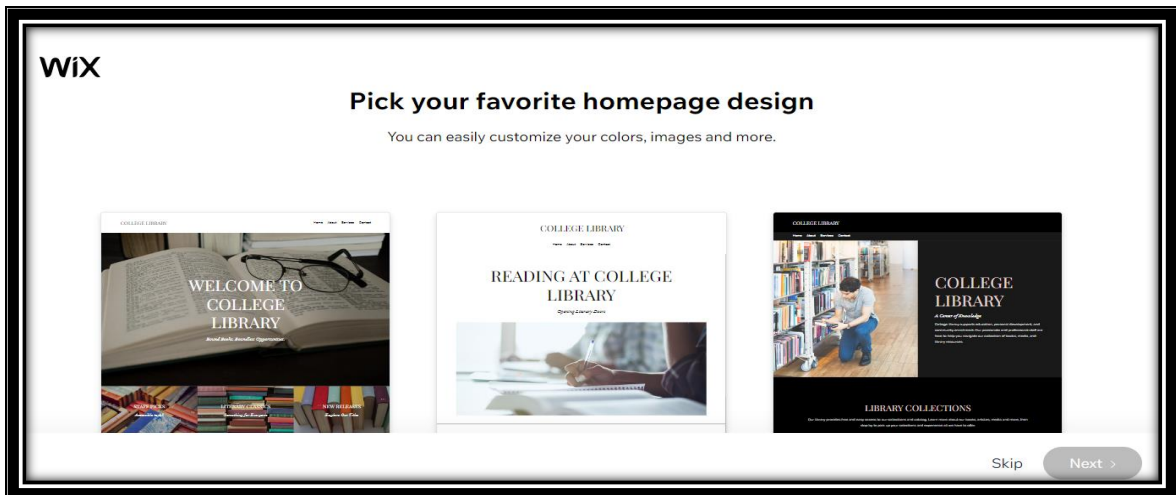
o   **Add the custom designed library pages provided andclickÉdit Site'. Additional pages if needed can be added later**
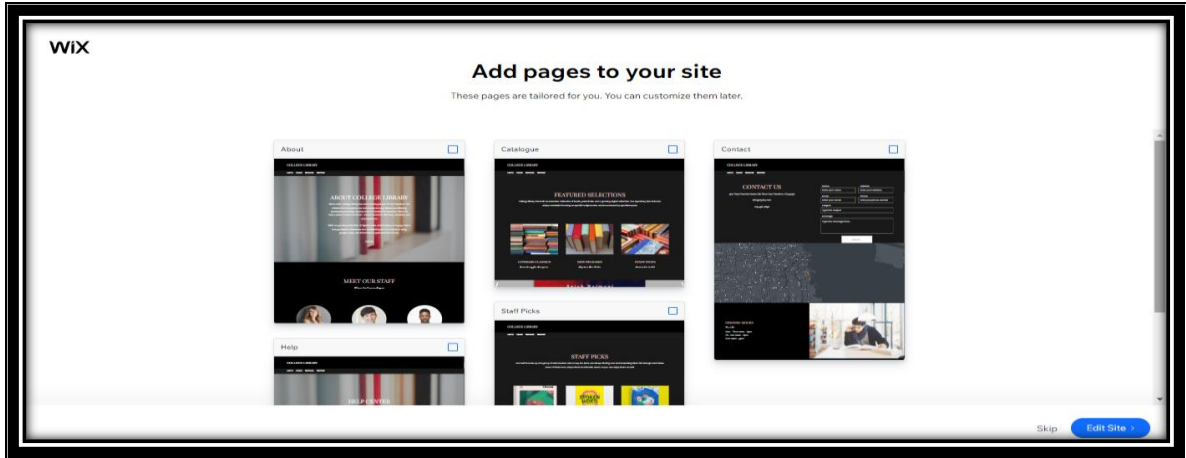
o   **You have now successfully completed building the basic Wixlibrarywebsite.** You can now further develop it typing in matter, addinglibrary content, pictures, modifying fonts, background, etc.
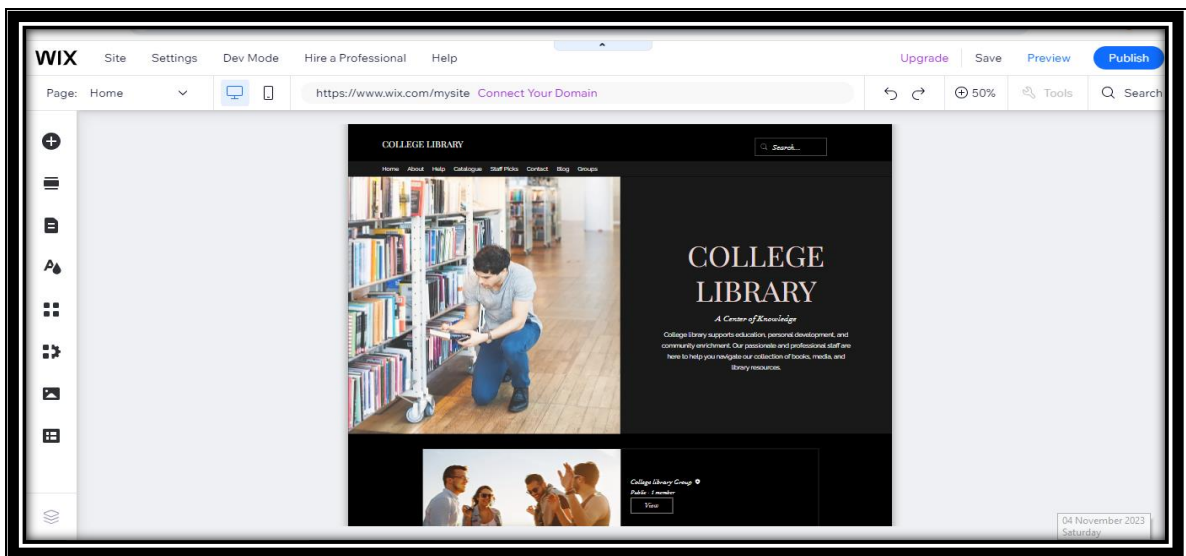
On completing the design of the new site, to make it live click the blue **'Publish'** button in the top right hand corner.

You should then get a message saying that your site has been published, with a direct link to it. Let's take a look at our site.
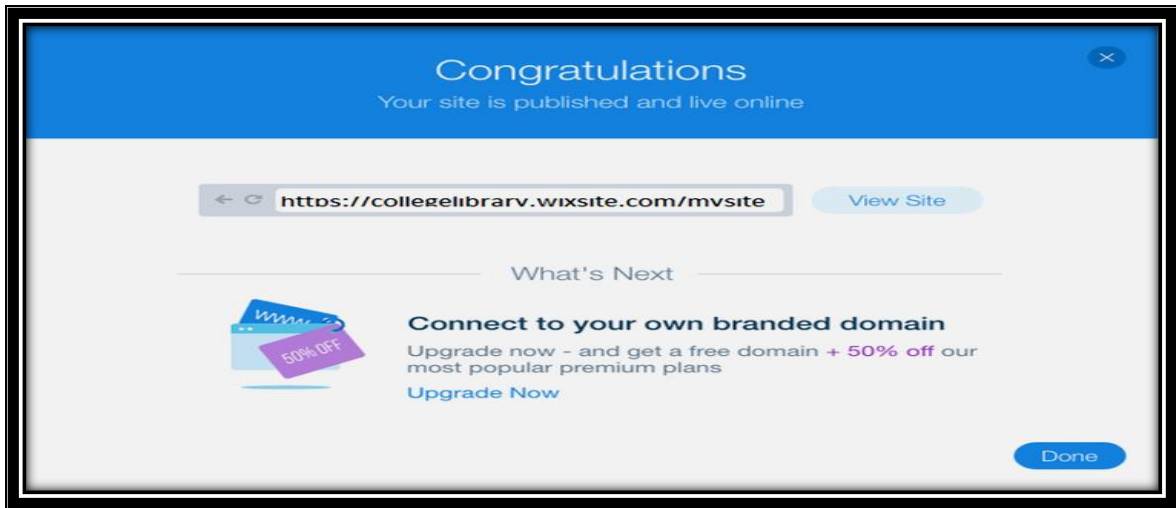
You can check the live website by clicking **'View site'** button.

Conclusion

Websites designed using free website builders may have its limitations, but on the other hand, it also provides a variety of benefits. These websites offer good access speed, are mobile friendly and are compatible known browsers. They are now very popular among small and medium concerns and meets all their requirements. And in the long run, if one feels that is not enough, they can still go for paid upgrades to suit to the requirements they may need later.

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[1]பகுதிநேர முனைவர் பட்ட ஆய்வாளர், முதுகலை மற்றும் தமிழாய்வுத்துறை, ஸ்ரீ மீனாட்சி அரசினர் மகளிர் கலைக்கல்லூரி (தன்னாட்சி), மதுரை-2.

[2]தமிழ்த்துறை உதவிப்பேராசிரியர், முதுகலை மற்றும் தமிழாய்வுத்துறை, ஸ்ரீ மீனாட்சி அரசினர் மகளிர் கலைக்கல்லூரி (தன்னாட்சி), மதுரை –2.

Abstract:

The short story is a strong form. This is not so easy to handle. The specialty of a short story is that it keeps the reader hooked like a fish caught on a baited hook as soon as the plot begins. Daily problems become the subject of the songs. Life is talked about in the stories of this period and If refers to the problems that need to be solved. Reading stories is not only a pleasure for the mind. The story should also instill a good idea in the heart of the readers. For that, some strategies should be used in the stories. S.Ramakrishnan, is shortly called as in tamil ES.Ra. was the master of many intellects that drew the world into its abode like molasses dragged by ants. This research paper highlights the literary techniques used in his collection of short stories named Mazhaiman.

Keywords:

Strategies, Horse racing, Rhetoric, Word usage, Emotion, Perception, Imagination, Characters, Organization.

ஆய்வுச்சுருக்கம்:

சிறுகதை என்பது ஒரு கனமான கலை வடிவம். இதைக் கையாள்வது அவ்வளவு எளிதல்ல. கதைக்களம் தொடங்கியதுமே வாசகனைத் தூண்டில் கொக்கியில் மாட்டிய மீனைப்போல் தப்பவிடாமல் செய்வது சிறுகதையின் சிறப்பு. இக்காலக் கதைகளில் வாழ்க்கை பேசப்படுகிறது. அன்றாடச் சிக்கல்கள் பாடுபொருளாகின்றன. தத்தம் சிக்கல்களை தாம் தீர்வுகாண விழைவனவற்றை எடுத்துரைப்பதாக அமைகிறது. கதைகளை வாசிக்கும் போது மனதிற்கு மகிழ்ச்சியைத் தருவது மட்டுமன்று. படிப்பவரின் நெஞ்சில் சிறந்த கருத்தை

விதைப்பதாகவும் அமைய வேண்டும். அதற்கு சில உத்திகளை கதைகளில் கையாள வேண்டும். எறும்புகள் இழுத்துக் கொண்டு போகும் வெல்லக்கட்டியைப் போல உலகை தனது இருப்பிடத்திற்குள் இழுத்துக் கொண்டு வந்துவிட சிறப்பான பல உத்திகளை கையாண்டவர்தான் எஸ்.ரா. என்று அழைக்கப்படும் எஸ். இராமகிருஷ்ணன். இவருடைய மழைமான் என்ற சிறுகதைத் தொகுப்பில் கையாண்டுள்ள இலக்கிய உத்திகளை வெளிக்கொணர்ந்து எடுத்துரைப்பதாக இவ்வாய்வுக் கட்டுரை அமைக்கப்பட்டுள்ளது.

திறவுச் சொற்கள்:

உத்திகள், குதிரைப்பந்தயம், சொல் பயன்பாடு, உணர்ச்சி, கருத்து, கற்பனை, குணாம்சம், ஒழுங்கமைதி, சொல்லாட்சித்திறன்.

முன்னுரை:

மக்களின் கதை கேட்கும் ஆர்வம் தொல்பழங்காலந்தொட்டே வேரூன்றியுள்ளது. அதன் பல்வேறு வெளிப்பாடுகள்தாம் தொடக்கம் முதல் இன்றுவரை இதிகாசங்கள், காப்பியங்கள், புதினங்கள், சிறுகதைகள், நாடகங்கள், கூத்துகள் எனப் பல்வேறு வடிவங்களைப் பெற்றுத் திகழ்கின்றன. இன்றைய நிலையில் இலக்கிய உலகில் சிறுகதைகளுக்கென்றே ஒரு தனித்த இடம் உள்ளது. கதையானது படிப்பவரின் நெஞ்சில் மின்வெட்டைப் போல் பாய்ச்சும் ஆற்றலும் குதிரைப் பந்தயம் போல தொடக்கமும் முடிவும் சுவை மிக்கதாகவும் அமைய வேண்டும். ஒரு படைப்பின் வெற்றிக்குச் சிகரமாக அமைவது சொல்லாட்சித் திறனே. உரிய சொல்லை உரிய இடத்தில் சிந்தித்து அமைப்பதே சொல்லாட்சித் திறன். அத்திறனைக் கையாள உறுதுணையாய் இருப்பது உத்திகளே. உத்திகள் என்பது ஆசிரியன் தன் கருத்தை வெளிப்படுத்துவதற்குப் பின்பற்றும் சிறப்பு முறை கொண்ட வெளிப்பாடு. அவ்வுத்திகளை கையாள்வதில் உச்சம் தொட்டவர் எஸ்ரா. தன் சிறுகதைச் சிம்மாசனத்தில் அழகு சித்திரமாய் வீற்றிருக்கும் **'எஸ். இராமகிருஷ்ணனின் சிறுதைகளில் காணலாகும் இலக்கிய உத்திகள்'** என்ற தலைப்பின் மூலம் சமுதாயத்தில் நிகழும் நிகழ்வுகளை பிரதிபலித்துக் காட்ட பயன்படுத்திய உத்திகளை ஆராய்வதே இக்கட்டுரையின் நோக்கமாகும்.

ஆய்வு நெறிமுறைகள்:

உத்திகள்:

ஒரு கலைப் படைப்பை உருவாக்குவதற்குப் படைப்பாளன் மேற்கொள்ளும் நுண்ணிய அணுகுமுறை உத்தியாகும். "ஒத்தகாட்சி உத்திவகை விரிப்பான்"[1] என்று தொல்காப்பியம் குறிப்பிடுகிறது. உந்தி எழும் நுண்ணறிவை உத்தி என்கிறது.

"உத்தி என்பதை நன்னூல் தந்திர உத்தி"[2] என்று குறிப்பிடுகிறது. இலக்கியம் படைக்கும் படைப்பாளி தாங்கள் கூறும் கருத்துகள், கொள்கைகள், கூற வரும் செய்திகள் போன்றன மக்களை நேரடியாகச் சென்றடைய வேண்டும் என்ற எண்ணத்தில் கையாண்ட பல வழிமுறைகளே உத்திகள் என்று அழைக்கப்படுகின்றன.

உணர்ச்சி உத்தி:

"விடை தர வேண்டிய தேவை இல்லாமல் கேள்வியிலேயே பதில் இருப்பதைப் போல" அமைவது உணர்ச்சி உத்தி ஆகும். மனமே கூறுவது போல் மன உணர்வினை வெளிப்படுத்தப் பயன்படுத்திய உத்தி உணர்ச்சி உத்தி.

உணர்ச்சி என்பது மனநல செயல்பாட்டு அனுபவம் ஆகும். இது தீவிர உயர்மட்ட இன்பம் அல்லது அதிருப்தி ஆகியவற்றால் தனித்தன்மையளித்து வகைப்படுத்தப்படும் செயல் ஆகும். உணர்ச்சி எனும் கூறு பெரும்பாலும் மனநிலை, குணாம்சம், ஆளுமை, ஒழுங்கமைதி மற்றும் ஆர்வமூட்டல் ஆகியவற்றுடன் பிணைந்துள்ளது.

நாம் அனைவரும் உணர்ச்சிகளை அனுபவித்திருக்கிறோம். நம் வாழ்வின் ஒவ்வொரு தருணத்திலும் அதைத் தொடர்கிறோம். சில சமயங்களில், ஒரே நேரத்தில் ஒன்றுக்கு மேற்பட்ட உணர்ச்சிகளை நாம் உணரலாம். சில சமயங்களில் முரண்பாடான உணர்ச்சிகளையும் கூட உணரலாம். சில நேரங்களில் உணர்ச்சிகள் மிகவும் தீவிரமாக இருக்கலாம்.

உணர்ச்சிகளை வெளிப்படுத்துவது என்பது ஒரு தனித்துவமான கலை. பல்வேறு மொழிகள் இருந்தாலும் நம் உணச்சிகளை நேர்த்தியாக வெளிப்படுத்துவதே அவற்றின் அடிப்படை நோக்கம் ஆகும். உணர்ச்சிகளை அழகாகவும் மற்றவர்கள் புரிந்து கொள்ளும் விதமாகவும் வெளிப்படுத்துவது மிகச் சிறந்த கலை. சில சமயம் நம் நடிவடிக்கை பிறரை காயப்படுத்தி விடுமோ என்று பல நேரங்களில் நம் உணர்ச்சிகளை வெளிப்படுத்தாமல் புதைத்து விடுகிறோம். அடக்கப்படும் உணர்ச்சிகள் மனித மனதின் மகிழ்வைக் களவாடிச் செல்கிறது.

உணர்ச்சிகளைப் புரிந்துக்கொண்டு எந்தச் சூழ்நிலையிலும் அவற்றை நேர்மறையாக வெளிப்படுத்தும் போது நம்முடைய ஆளுமைத் திறன் மேம்படும்.

கதைச் சொல்லும் நாயகராம் எஸ். இராமகிருஷ்ணன் பல உணர்ச்சிகளை வெளிப்படுத்தும் கதைகளை படைத்து அதை வாசிக்கும் வாசகர்களாகிய நம்முடைய உள் மனதின் உணர்வினைத் தொடும் ஆளுமைத் திறன் கொண்டவர் என்பதனை "வெறும் பிரார்த்தனை" என்னும் சிறுகதை மூலம் அழகாக வெளிப்படுத்தியுள்ளார். 'சரஸ்வதி' என்ற கதாபாத்திரத்தின் மூலம் ஒரு குடும்பச் சூழலை மட்டும் முன்னிறுத்தி அனைத்து உணர்வுகளையும் வெளிப்படுத்தி அறுசுவை விருந்து படைத்துள்ளார். 'காதம்பரி' என்ற மூத்த மகள் கதாபாத்திரம் மூலம் 'வெறுப்பு' உணர்வை வெளிப்படுத்திய பாங்கும் 'ரமா' என்ற இளைய மகள் கதாபாத்திரம் மூலம் 'சலிப்பூட்டும்' உணர்வையும் 'காதம்பரி, ரமா' என்ற இரு சகோதரிகளும் இணைந்து கலந்துரையாடும் போது 'பயம்' என்ற உணர்வையும் வெளிப்படுத்திய சூழல் மிகவும் அருமையாக இருந்தது.

சரஸ்வதியின் கணவன் குடிகாரன். மற்றவர்களின் உணர்வுகளை புரிந்து கொள்ளாமல் இருந்ததோடு அவர்களின் உணர்ச்சிகளை உதாசினப்படுத்தியது வாசகர்களின் கோபத்திற்கே உச்சமாக அப்பகுதி அமைந்தது எஸ்ராவின் ஆளுமைத் திறனை ஆச்சர்யத்திற்கு உள்ளாக்கியது.

இக்கதையில் சரஸ்வதி தன் உள்ளுணர்வின் உணர்ச்சிகளை உள்ளுக்குள்ளே புதைத்து கண்ணீரில் வெளிப்படுத்தியது அவள் மனநிலையை மட்கிப்போகச் செய்தது போன்று அமைந்தது. 'காதம்பரி' வேலை செய்யும் மருந்தக முதலாளி தினந்தோறும் இரண்டு முறையாவது கடுமையாகத் திட்டி தன் கோப உணர்வை வெளிப்படுத்திய விதமும் கோபத்தை வெளிப்படுத்தினாலும் வேலை விட்டு போகும் போது 'பத்திரமா போகணும் பாப்பா' என்று கூறும் போது அன்பு உணர்வையும் அத்துடன் ஒரு சாக்லெட்டையும் நீட்டுவார். தலையாட்டியபடியே அதை வாங்கிக் கொண்டு அதை வாயிலிட்டு சுவைத்த படியே நடக்கத் துவங்குவாள். வீடுவரை அந்த சாக்லெட்டை சுவைத்துக் கொண்டே செல்வாள். ஒரு நாளின் மொத்த வலியையும், கோப உணர்ச்சியையும் உள்வாங்கிய கனத்த மனதையும் கரைத்து விடும் அந்தச் சுவை.

ஒரு மனிதனின் கோபம் சாக்லெட் போன்று நிமிடத்தில் கரையக் கூடியது அதன் சுவையை மனதில் தக்க வைப்பது போல் கோபச் சொல்லும் மனதை விட்டு நீங்காது.

"தீயினாற் சுட்டபுண் உள்ளாறும் ஆறாதே
நாவினாற் சுட்ட வடு"[3] (திருக்குறள் - 129)

என்ற குறளுக்கு ஏற்ப தீப்புண் எளிதில் ஆறிவிடும். நாம் வெளிப்படுத்தும் வீரிய செயலும், சொல்லும் என்றும் ஆறாமல் வடுவாகவே இருக்கும். ஆம்! உணர்ச்சிகளே ஆற்றலின் ஊற்று. எனவே உணர்ச்சிகளை முறையாக வெளிப்படுத்துவோம்! மகிழ்ச்சியை நலமுடன் தக்கவைப்போம்!

சொல் பயன்பாட்டு உத்தி:

சொற்களை அளவாகப் பயன்படுத்தி உரைநடையை அழகு செய்வது ஒரு சிறந்த உத்தி. அந்த வகையில் 'விரும்பிக் கேட்டவள்' என்னும் சிறுகதையில் 'வசந்தி' என்னும் கதாபாத்திரம் இனிய குரல்களின் பாடலுக்கு அடிமையானதையும், குரலுக்கு அழுத்தம் கொடுத்து குரலின் மூலம் மன அழுத்தம் குறையும் பாங்கையும் சொல் அழுத்தம் மூலம் ஆசிரியர் கூறியுள்ளார்.

'இந்த உலகத்திலேயே மனுசனோட குரலுதான் பெரிய ஆச்சர்யம்' அது என்னவெல்லாம் மாயம் பண்ணுது. சிலரோட முகம் மறந்து போய் குரல் மட்டும் தான் ஞாபகத்தில் இருக்கும். குரலுக்கு வாசனை இருக்கு, நிறம் இருக்கு, வெளிச்சம் இருக்கு, ருசியும் இருக்கு. நான் அதிலேயே கிறங்கிப் போயி கிடக்கேன் என்ற வசந்தியின் வசனத்தின் மூலம் குரல்தான் இக்கதையின் கருவூலமாக உள்ளதை தெரிவித்துள்ளார்.

"திறனறிந்து சொல்லுக சொல்லை அறனும்

பொருளும் அதனினூஉங்கு இல்"[4] (திருக்குறள் 644)

என்ற குறளுக்கிணங்க கேட்பவரது மனப்பான்மையை அறிந்தே எந்தச் சொல்லையும் சொல்ல வேண்டும் என்பது போல் கேட்போரின் மகிழ்ச்சிக்கு ஏற்றாற் போல் இக்கதையில் இசைப்பாடல் அமைந்து இருக்கிறது. மரணத் தருவாயிலும் இனிமையான குரல் இசை அவள் மனதை மகிழ்ச்சியாக வைத்திருந்தது.

'மழைமான்' என்ற கதையில் 'தேவபிரகாஷ்' என்ற கதாபாத்திரத்தின் மூலம் மனம் விரும்பியதை நாம் உடனே செய்கிறோம் என்ற வாசகத்திற்கு அழுத்தம் கொடுத்திருப்பதை உணர்த்தும் விதமாக கதையின் தொடக்கமே 'தேவபிரகாஷிற்கு உடனே ஒரு மானைப் பார்க்க வேண்டும் போலிருந்தது' என்று அவன் மன விருப்பத்திற்கு அழுத்தம் கொடுத்து தொடங்கி இருக்கிறார்.

கதையின் கருவூலமே சொற்களின் அழுத்தமாய் இடம்பெறுகிறது. இதற்காகச் சொல்லையோ கருத்தையோ திரும்பத் திரும்பச் சொல்வதுண்டு. சொற்களை இங்கு அளவாகப் பயன்படுத்தி உரைநடையை அழகுபடுத்திக் காட்டியுள்ளார்.

கருத்து உத்தி:

ஓர் எண்ணம் சற்று சந்தேகத்துடன் முன் வைக்கப்படும் போது அது கருத்து என்றும் உறுதியாக முன்வைக்கப்பட்டால் அதை கொள்கை என்றும் கூறுகின்றனர். 'மழைமான்' என்ற கதையில் கற்பனையான வாழ்வே சுகம். நிஜம் ஒருபோதும் ருசிப்பதில்லை என்ற அழகான கருத்தை வெளிப்படுத்தி உள்ளார்.

'மழைமான்' கதையில் 'தேவபிரகாஷ்' எங்கு தேடியும் மான் கிடைக்காத போதும் அதற்காக பல பயணங்கள் மேற்கொண்டு மானைப் பார்க்கத் துடிப்பதும், அலுவலகத்திற்கு போன புதிதில் படி ஏறும் போது 38 படிக்கட்டுகளை தினந்தோறும் எண்ணி மகிழ்வதும் பின் போகப்போக படிகள் இருப்பதே கண்ணிற்குத் தெரிவதில்லை. கால்கள் தானாகவே ஏறிப் போய்விடுகின்றன என்றும் கூறுவதில் இருந்து நம் வாழ்க்கையும் அப்படித்தான் ஒரு செயலை ஆரம்பிக்கும் போது உற்சாகத்துடனும் ஆர்வத்துடனும் செயல்படுவோம். பின் அதுவே சலிப்பூட்டும் தன்மையாய் மாறிவிடுகிறது என்ற கருத்தை உணர்த்துவது போல் தோன்றுகிறது.

இதே போன்று ஒரு முறை காலை நேரத்தில் மனதில் பென்சீல் சீவி எவ்வளவு நாளாயிற்று என்று ஒரு விசித்திர எண்ணம் தோன்றுகிறது. பகல் முழுவதும் அதைப் பற்றியே யோசித்துக் கொண்டிருந்தார். பென்சில் திருகிகள் வந்த பிறகு பிளேடால் பென்சிலை சீவுவது முற்றிலும் கைவிடப்பட்டுவிட்டதும் பென்சிலை உபயோகிப்பதே அரிதாகிப் போனது என்பது தெரிந்தும் பென்சிலை ஏன் பிளேடால் சீவ வேண்டும் என மனம் ஒரு பக்கம் யோசித்தாலும் உடனே அச்செயலை செய்ய வேண்டும் என்ற ஆசைமட்டும் தீவரமடையத் துவங்கியது. பியூன் பழனியை வரவழைத்து அதனை வாங்கி கூர்மையாக பிளேடால் தீட்டினார். இதற்கு எல்லாம் என்ன காரணம் எனச் சிந்திக்கும் போதே அவருக்கு புரிந்தது. இளமையில் கண்ட பொலிவு திரும்ப வரப்போவதில்லை. தான் தோற்றுவிட்டோம், இளமையில் மகிழ்ச்சிகளை அனுபவிக்க மறந்து விட்டோம். தான் ஒரு காலி பாட்டில் மட்டுமே என்று தன் மீதே ஆத்திரமும் கோபமும் அடைந்து கொண்டார்.

தன்னுடைய சிறு ஆசைகளைக் கூட நிறைவேற்றாமல் நிரகாரித்து விட்டு எதிர்காலத்தை நோக்கி ஓடி இளமை போன பிறகு மறைந்து போன நினைவுகளை நினைவூட்டி மீண்டும் முதுமையில் அதைச் செய்தாலும் மகிழ்ச்சி தராது. உதிர்ந்த மலர்கள் மீண்டும் ஒட்டாது, மலராது. வாழ்க்கையும் அப்படித்தான் ஒருவர் போல் இன்னொருவர் வாழ முடியாது. நமக்கான வாழ்க்கையைச் சரியாகப் பயன்படுத்தி மகிழ்வோடு வாழ்ந்து கொள்ள வேண்டும். சென்ற

காலத்தை நினைத்து நேரத்தை செலவழிக்காமல், இருக்கும் காலத்தை இன்பமோடு வாழ்வோம் என்ற கருத்தை இன்பமூட்டும் வகையில் கூறியுள்ளார்.

கற்பனை உத்தி:

கற்பனை என்பது மனத்தின் ஆற்றல். ஒரு கலைஞருக்கு இருக்க வேண்டிய இன்றியமையாத தகுதி அவனது கற்பனை ஆற்றலேயாகும். புலன் காட்சிகளால் பெறுகின்ற அனுபவத்தை மாற்றியும், திரித்தும், கூட்டியும், குறைத்தும் உணர்ச்சியூட்டக்கூடிய வகையில் கலைவடிவமாய் படைப்பது கற்பனை. கவிஞன் தான் உணர்ந்த உணர்ச்சியையோ, பெற்ற அழகின்ப அனுபவத்தையோ கண்காட்சியையோ, நாமும் முழுமையாகவும் தெளிவாகவும் உணரவோ, அனுபவிக்கவோ, "கண்கூடாகக் கண்டு இன்றுபுறுமாறு அமைத்துக்காட்டும் அரிய கலைத்திறனே கற்பனை"[5] என்று சு.பாலச்சந்திரனின் இலக்கியத் திறனாய்வில் (பக்.95-96) கூறியுள்ள கருத்து எண்ணுதற்குரியது.

கற்பனையின் ஆற்றலை உணரமுடிகிறது, உணர்த்த முடிகிறது. ஆனால் அதனை வரையறை செய்வது எளிதன்று என்று வின்செஸ்டர் கற்பனைக்கு விளக்கம் தருகிறார். கற்பனைத் திறன்தான் ஒரு கலைஞனை ஆளுமையில் காலூன்றச் செய்கிறது. கற்பனை நாயகன் எஸ்ரா தன் கதையின் மூலம் கற்பனை ஆற்றலை கனிவாக வெளிப்படுத்தியுள்ளார்.

'மழையாடல்' என்னும் சிறுகதையில் 'சங்கவை' என்ற துறவி தன்னுடைய ஏழு பிக்குணிகளிடம் மழையைப் பற்றி என்ன நினைக்கிறாய்? என்ற வினாக்களை எழுப்புகிறாள். அதற்கு அவர்கள் தியானம், அகம் குளிர்தல், வெறுப்பு தோன்றுகிறது, தண்டனை, பிதற்றல் எனத் தன்னுடைய கற்பனையான பதிலைக் கூறினர். சங்கவையோ கடந்த கால நினைவுகளை மீட்சிக் கொள்ளச் செய்வதற்காகத்தான் மழை வருவதாக எனக்குத் தோன்றுகிறது என்றார்.

தன்னுடைய கற்பனையைக் கூறிய பின் மீண்டும் அதே வினாவினை மறுபடியும் துறவிகளிடம் கேட்டார். ஊர், வீடு, பிடித்த மனிதர், காதல், பிரிவு போன்றவற்றை நினைவுபடுத்துவதாகக் கூறினர்.

சங்கவையோ தனக்கு மரணத்தை நினைவுபடுத்துவதாகக் கூறினாள். ஏனென்றால் ஒரு துளி வானில் இருந்து கீழே விழுந்து கொண்டிருப்பது போலத்தான் நமது வாழ்க்கையும். இந்தத் துளி கடலில் கலந்து விட்டால் நித்யமாகிவிடும். மண்ணில் விழுந்து விட்டால் உறிஞ்சப்பட்டுவிடும். மழை மரணத்தின் நாடகம் போன்றது என்று மழைத்துளியில் தன் கற்பனைகளை தென்றலுடன் வீசும் சாரலாக ஆசிரியர் தெளித்துக் கூறியுள்ளார்.

'சந்தனா' என்ற கதாபாத்திரம் ஒரு கேசத்தில் தன்னுடைய கற்பனை வண்ணங்களை அழகாக கூறியுள்ளார். சந்தனாவின் அம்மா கேசம் மீக நீளமானது. அதைப் பார்த்து சந்தனா பொறாமைப்பட்டு நானும் இதைவிட நீளமான கேசம் வளர்ப்பேன் என்று கூறிய போது அவளுடைய தாய் ஒவ்வொரு ரோமமும் ஒரு ஆசை. நிறைவேறாமல் போன ஆசைகள், கழிந்த ரோமங்களைக் குறிக்கும். வாழ்ந்து அனுபவித்து சலித்த ஆசைகள், நரைத்த ரோமங்களாகி விடுகின்றன என்றாள். ஒரு கேசத்தின் மூலம் கற்பனை மணத்தை நுகரச் செய்துள்ளார்.

ஒரு குருட்டுப் பிச்சைக்காரன் கையில் ஒரு கோல் வைத்துக் கொண்டு நாயை விரட்டுவது போல் மழையை விரட்டிக் கொண்டிருந்தான். என்ன செய்கிறாய்? எனக் கேட்ட போது மழை என் பின்னாடியே வருகிறது. அதைத் துரத்திக் கொண்டிருக்கிறேன் என்றான். துரத்தினால் மழை போய்விடுமா? என்று கேட்ட போது சில சமயம் போய்விடும். சில சமயம் பிடிவாதம் பிடிக்கும் என்று ஒரு சிறுவனைப் போல பதில் சொல்லிக் கொண்டு இருந்தான். இறுதியாக மழையும் நானும் ஒன்றுதான். இருவரும் இலக்கில்லாமல் போய்க் கொண்டிருக்கிறோம் என்று கூறினான். ஒரு பார்வையற்றவன் மூலம் ஒரு மனிதனின் கற்பனை என்பது அவர்களுடைய அனுபவங்களாகவே வெளிப்படுகிறது என்று காட்டியுள்ளார். 'கை கால் முளைத்த காற்றே கற்பனை' என்று தன் கற்பனைத் திறத்தால் கற்சிலையாய் மனதில் நிறுத்தியுள்ளார்.

முடிவுரை:

ஓர் இலக்கியப் படைப்பு பலரால் படிக்கப்படுவதற்கும் பாராட்டப்படுவதற்கும் அதன் இலக்கிய நயமே காரணம் எனலாம். எனவேதான் இலக்கியம் இலக்கியத்திற்காகவே என்ற கோட்பாடு எழுந்தது. இலக்கியம் வாழ்க்கையைக் காட்டும் காலக் கண்ணாடி. அக்கண்ணாடியில் தன்னை பன்முகமாக பிரதிபலித்துக் கொண்டவர் எஸ்ரா. அவருடைய சிறுகதைகளில் இலக்கிய உத்தியான சொல் பயன்பாட்டு உத்தி, உணர்ச்சி உத்தி, கருத்து உத்தி, கற்பனை உத்தி போன்ற நயங்களால் தன்னை மிளிரச் செய்து காட்டியுள்ளார்.

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Unveiling of Women Characters in Anita Nair's Select Novels

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Abstract

Indian women novelist in English has emerged as important writers in the recent times. They have presented different themes like the fight between tradition and modernity, women's fight for liberation, psychological issues and identity crisis in the patriarchal society. The women are suppressed by male dominated society based on traditions. As a woman, the writers can understand the inner thought of the inconsiderate women with their protagonist as clearly portrays their feelings, knowledge and emotion with feministic approach. Feminism in India though it has many languages yet could not show its potential. After that it will be changed. The women writers got opportunity to express themselves effectively. Before 1980's the women writers had a dilemma of women and backward classes in conventional societies which regarded them as inferior in the pyramid. After the eighties, Indian women got recognition, showing their feminine prudence. Many well known writers like Kamala Markandaya, Anita Desai, Nyanthara Sahghal, Shashi Deshpande, Gita Hariharan, Kiran Desai and Anita Nair etc. They show the new period of liberation for the women with the social and intellectual life.

The women writers have presented the 'New women', how she is in her family and society. The protagonist individually faces the society for her survival. They disclose utilization of women and their struggle for a new life which provides enough space for their own feelings and emotions have raised as work and it paids immediate attention. They establish different world of women's feelings and achievements. The contemporary novelists have made the action of social change meaningful with their point. Among these novelists, Anita Nair represents the new women in the society. Anita Nair's novel surveys the search for identity of the woman to

satisfy herself essentially as a being, individually plays many roles as daughter, wife, mother and so on. Woman has suffered a worst kind of oppression in the culturally determined Indian society. In the institution of marriage, woman has not enjoyed the equality of status. Our culture is so programmed that it grants all powers to its men and prohibits a woman even to exist. There comes many phases in the life of a woman which undermine her sense of identity. The violence against a woman starts when her sex is determined in the very womb. With the swing from medieval man centric society to business vision of middle class male-controlled society, the life of societal relations has corrupted, and vivacious distinction, egotism and self-governed have advanced as the urgent individual factors in the social relation. When all is said in done, female characters quited not with standing their persecution under a man centric framework. Women have not seen denied presence as total individuals, physically and rationally. Act to perform on a libertarianism with men, yet in addition penniless of the chance to offer articulation to their emotions, their feelings of trepidation and their misery.

Key Words: Women Subjugation, Mythology, Feminism, Identity, Betrayal.

The living writer Anita Nair is leading fiction writer of Indian English literature. Her fiction is predominantly Indian both in setting and characterization. Anita Nair in her novels talks about woman and her experiences into their day to lives. Nair in her creative writing argues that woman all over India face the same problems. She mainly focuses on the sentiments and emotions of the woman whose intentions are not accepted by the society they live in. They impose a number of questions to the conservative society about the pains and sufferings, she comes across, but her questions go hardly answered. The woman of Indian traditional society is so conditioned that they face a lot of difficulties. Her life becomes miserable she tries to come out from these strict social norms and customs. Rape, female abortion, female subjugation, marriage endowment, marital rape, dissatisfaction, suppression, identity,self-discovery, individuality and social issues are the repeated themes of Nair's narrative fictions. Nair gives a main role to her socially conscious female characters. Her female characters are demanding equality from their male counterparts. Such characters help Nair to unveil the conservative outlook of the Indian society and the evil practices.

This paper deals with the women characters in the novels like *The Better Man*, *The Ladies Coupe* and *Lessons in Forgetting*, unveiling them from suppression, Patriarchy. The women portrayed here is completely different from the others. Anjana, in the novel *The Better Man* was brought up by her parents in the liberal way. She leads her life with her parents, feels free and fulfills her desires. When her age turned twenty seven, her independence is lost in the name of marriage. In her married life she suffers several injustices executed by her husband. Anjana unconsciously imitates the perfect woman because of her traditional behaviour. From her early childhood, girls are instructed to stay pleased in their married lives under any situations, and thus suitable in these ethics in her psyche. In her married life, she tolerates several injustices executed by her husband. Early days of her marriage life, she tries a lot to make an impression on her husband, Ravindran but she couldn't. She has to oblige her husband but it becomes fail. She is eager to lead a good life with him but it is mere a dream for her to achieve. She expects freedom and love in marriage.

Finally, Anjana breaks the usual practices, Indian consciousness and creates the world of her own. Anjana's turns up from her unsuccessful marriage, with the persistence to live as a free individual, is an assertion of her individual freedom. She meets Mukundan and adore with him. He is a good man, tells her: "Anjana….I know you think I am a good man. A gentle man someone you can depend on completely. I don't know if I am that man you make me out to be. My mother begged me to rescue her away. But I didn't. I was afraid of my father and so I made excuses….That is the kind of man I am. A weak and undependable creature. Do you want to be a part of such a man's life" (244-45). She finds in Mukundan everything which she had been looking for in Ravindran. Mukundan does not ignore her presence and her thoughts, but instead helps her to regain her freedom of herself as an individual, a human being with her own recognition. Anjana is an amalgam of both traditional and modern elements and she wants uniqueness and frees herself. She couldn't get recognition of her identity from Ravindran, she chooses a new path for her own.

The Ladies coupe women characters whom Nair held together start unveiling the secrets of their lives. Akhila, the protagonist, experienced the other six women's unpleasant circumstances and their quest for identity. She decides to go on this journey because she realizes

that she has reached her saturation point where her life has been taken out of her control. She wants to run away from her family members and responsibilities therefore, she plans to go on a journey that ultimately makes her a different woman. Akhila spends her young part of life for her family, but her family after the death of her father, never gives any appreciation and acknowledgement. Eventually, these multiple factors encourage her to take extreme measures against the social and the religious norms.

As a modern woman Akhila feels troubled with her mother's conventional preaching. She sacrifices all her happiness and her personal life because of her brother's education and sister's marriage. They all get settled in their lives, but turn a blind eye towards her desires. Not even her mother thinks about the welfare of her daughter and remains so unconscious to the fact that she has made sacrifices so that her family prospers. The noble deed of prosperity done by her for her family adds to misfortune in her life. Her mother never thinks for her to get married and have family. She is expected to play, "Young as she is, she hopes that one day she will have a home and family of her own" (85). She feels caged because of their indifferent attitude. She likes everything which is against narrow-minded Brahmin culture. Akhila's revolt against the forced customs on her.

The protagonist Akhila and other characters unconsciously are subjugated by the masculine figures straightly and accidently. Every character emphasizes the stories of victimization physically and psychologically. A female is always looked down upon by the society. It is generally believed that, a female is incapable of handling life without the help of men in family as well as the society. This traditional ideology had been spread in the mind which has made life of women turn on their companions reluctance. This novel pictured the modern technology and socially developed society which fails to acknowledge and recognize the role of female. Through the protagonist, it tries to show the possible independence and freedom to women. By this novel Anita Nair has tried to reflect the suffragist women and their want of self – discovery. They must have independence and their own existence.

Lessons in Forgetting, Meera belong to an upper middle class family, feels like a queen in her domestic world. She leads a beautiful life in the Lilac's House till a major change came in

her life. This house makes major changes in Meera's life. She gets married to Giri who came as a model, co-coordinator to assist shooting for a film and falls for Meera seeing her beauty. He gets greed for the Lilac's House thinking that to be owned by Meera and decides to marry her. Giri's wrong assumption as Meera to be the owner but in reality that house is on leash to them. Giri thinks that if he marries Meera he can live and lead a lavish life and also thinks to sale the Lilac's House. Meera is very loyal; she submits her whole life to her husband. After marriage she has disclosed all her dreams, and then she takes care of her husband. She forgets herself and her identity while taking care of her husband. Giri, her husband does not respect his wife. He leads his materialistic life with his wife. He does not love her and has no attachments towards her. Though Meera neither raise her voice nor words complete solace within him. She listens to his every word like a typical woman. This women character shows the genuine life of women in this society. She was entirely dependent on Giri . She could not perceive herself. She could not able to face the rasping actuality of being discarded by her husband from his life and his disloyalty after she rejected to sale the Lilac House.

Meera started to realize her change after being she was left alone by her husband to take care of the family and take the household duties upon her. She realizes very late that her perception was wrong towards her husband. She learnt how to live the life without depending on her husband. 'Being a Postgraduate in English she could easily get job. She becomes a changed woman. Her mother and grandmother notice this and a measuring spoon that didn't brim anymore. But they said nothing. The sterm cast of her face alarmed them more than Meera realized' (84). Meera transforms herself from being this infirm woman and becomes an edified self. She finds a job for herself as a research assistant and becomes economically independent. She realizes her identity which was lost after her marriage.

In the Patriarchal set up, whatever happened in the man-woman relationship, it is the woman who is universally blamed. A woman suffers because of terms and social norms. Anita Nair in her novel *Lesson in forgetting* highlights the sufferings of women characters. They never think about themselves and much committed to family. After knowing the reality, they turn their life individually and lead an independent life. Nair shows the dark reality of the society, where many women can make themselves independent but fails to make it as they remain dependent.

So she raised her voice for these women in all her novels and asks women to be strong and realize themselves. The author wants to express how these women try to change the atmosphere of their life and keep their dignity and their independence in real life. The major theme on Anita Nair's works is 'Women's liberation' and her 'Dignity'.

Woman finds life less promised and confusing due to her social and cultural insecurities. At any moment Women come out of their confinements, they have to fight to wipe out the negative image of women already keeps in the minds of men and women. In that aspect women are treated as angels and goddesses. In some other aspects women are expected to be slaves, who are ready to work for a man and his benefits and comfort. Anita Nair, with a deep, psychological insight, skillfully utilizes the story of all three novels. Anita Nair presents the experimental fight of woman who refuses to flow along the current and refuses to submit her individual self. The woman rising out of such situations is a defeated individual who undergoes much pain and suffering. Anita Nair indicates a woman's life start from self-sacrifice to self-realization and self-negation to self-affirmation.

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Demographic Aspect of Variations of Female Characteristics in Usilampatty Taluk, Madurai District: A Geographical Perspective

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Abstract

Examining the demographic aspects, including growth, distribution, sex ratio, literacy, and occupational structure of the female population in Usilampatti Taluk, Madurai district sounds like a comprehensive study. Using secondary sources such as the Census of India and district census handbooks is a common and reliable approach for demographic investigations. The period selected for the present study is four decade from 1981 to 2011 and has been taken as village wise. The data analyzed will simple techniques like percentage share and average are used bring out intra-spatial patterns used to draw the map and a diagram to the data is analyzed. All the information's are mapped with suitable cartographic tools by using Arc GIS 10.2.2 software.

Key Words: *Female Characteristics, Distribution, Sex Ratio, Literacy and Occupational Structure.*

Introduction

The study of female population characteristics is crucial for understanding societal dynamics. Empowering women, especially in traditional societies, is indeed a complex and gradual process. The status of women is not uniformly raised as there are so many obstacles related to geographical, economic, social and political constructions. Still more than 90 percent of women in India do not enjoy freedom from the clutches of hardship imposed by the society.

Analyzing female population characteristics in terms of decision-making participation and access to opportunities in education, health, labor force, and income provides valuable insights into societal dynamics.

At present women activity contributing various economic, social and other developmental activities. But the sphere of women's role in the process of development has varied from society to society, depending upon difference in tradition, culture, education status and response to technological development.

Study area

Madurai district is an integral part of Tamilnadu, comprising one of the 32 districts in the state. Usilampatti Taluk is situated in the Madurai district within one of the administrative structures of Tamil Nadu. The geographical details of Usilampatti Taluk in Madurai district, extends between $9°51'5"$ and $10°4'28"$ North latitudes and between $77°40'7"$ and $77°58'59"$ East longitudes (Fig.No.1).
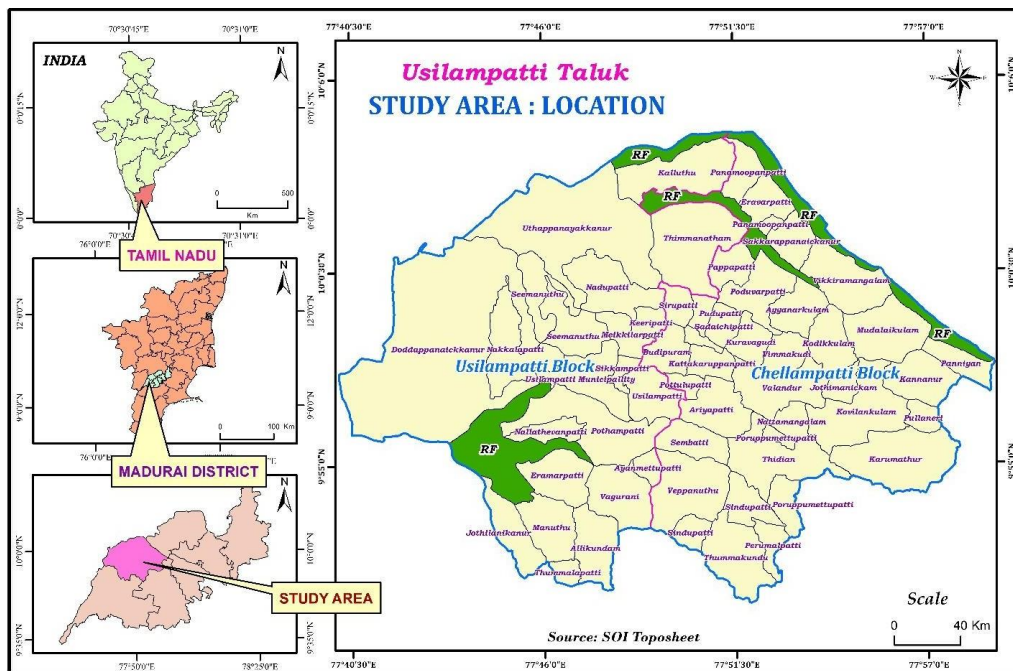
Fig No: 1

The average elevation of 201 meters and a total geographical area of 501.368 sq. km provide valuable insights into the topographical features of Usilampatti taluk in the Madurai

district. It seems like Usilampatti Taluk is divided into 2 blocks like Usilampatti and Chellampatti, 5 firkas namely Usilampatti, Uthappanaikanur, Valandur, Karumathur and Sindhupatti, and 54 revenue villages which includes 357 hamlets, 47 revenue panchayats and one town panchayat namely Usilampatti under its administrative capacity. Usilampatti taluk is bordered by Dindigul district to the north, Vadipatti taluk to the northeast, Thirumangalam taluk to the Southeast, Sedapatti taluk to the south and Theni district to the west. Usilampatti taluk is located around 40 kilometers away from Madurai city, and it primarily consists of rural areas.

Aim and Objectives

Analyzing variations in female characteristics based on demographic factors like sex ratio and female literacy rate, along with exploring female work participation rates across primary, secondary, and tertiary sectors, provides a comprehensive perspective.

The specific objectives have been framed for the present study as follows:-

❖ To analyze the sex ratio and changes in the Usilampatti taluk during the decade 1981 to 2011.

❖ To study the literacy rate and changes during the decade 1981 to 2011 in the study area.

❖ To study the occupational structure, particularly in terms of primary, secondary, and tertiary activities of the economy for the female population in Usilampatti taluk between 1981 and 2011.

Methodology and Techniques

The present study utilizes simple statistical methods and a cartographic technique for data analysis is straightforward and effective. It allows for a clear assessment of During the years 1991 and 2001 the Usilampatti taluk has low sex ratio. There is a lot of variation in the pattern among the villages. This may be due to female infanticide was more in that area. Due to the motivation and awareness created by the NGOs and Government programmes, the sex ratio in the year 2011 has increased in Usilampatti taluk. This is the main reason for the increase in the sex ratio.
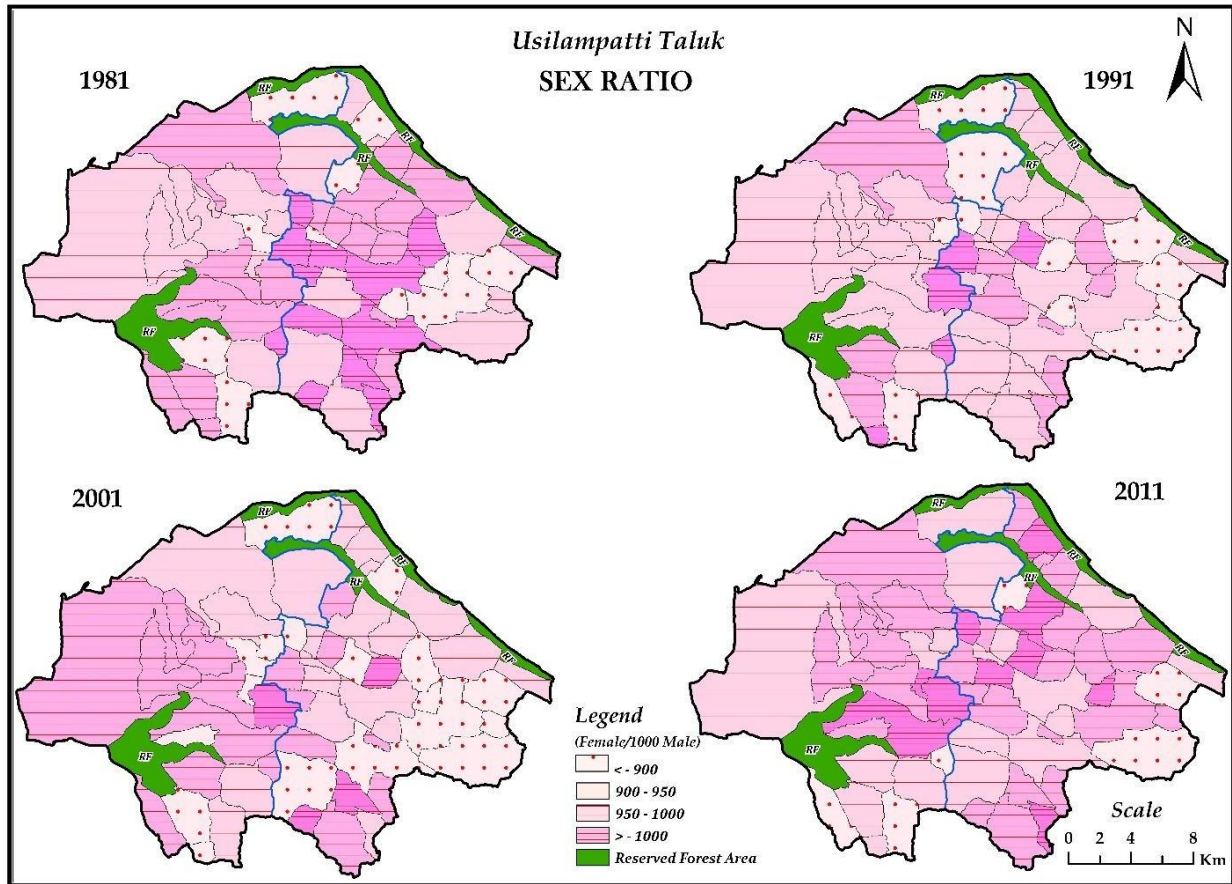
Fig No: 2

Table. No. 2
Usilampatti Taluk
Spatial Pattern of Sex ratio

S. No	Village Name	Sexratio (Female/1000 Male)				S. No	Village Name	Sexratio (Female/1000 Male)			
		1981	1991	2001	2011			1981	1991	2001	2011
1	Uthappanaickanur	969	957	912	953	29	Usilampatti	998	1080	1022	1014
2	Kalluthu	862	776	829	906	30	Sikkampatti	909	935	819	1055
3	Panamoopanpatti	906	902	943	982	31	Meikkilarpatti	887	944	882	930
4	Eravarpatti	892	928	927	1002	32	Keeripatti	916	805	886	940
5	Sakkarappanaickanur	975	923	896	969	33	Nadupatti	935	934	933	985
6	Vikkiramangalam	966	937	915	938	34	Seemanuthu	903	938	953	970
7	Mudalaikulam	926	890	907	957	35	Nakkalapatti	938	948	968	969
8	Panniyan	969	920	929	905	36	Doddappanaickanur	948	929	978	946
9	Kannanur	888	847	875	861	37	Nallathevanpatti	973	928	851	970
10	Pullaneri	937	900	942	972	38	Pothampatti	956	926	986	1003
11	Karumathur	913	872	876	893	39	Sembatti	1075	944	951	925
12	Kovilankulam	877	904	807	986	40	Ariyapatti	944	953	914	988
13	Jothimanickam	840	853	798	1013	41	Nattamangalam	773	777	908	945
14	Valandur	1003	941	915	943	42	Thidian	1030	930	887	930
15	Kodikulam	1018	984	849	978	43	Poruppumettupatti	953	965	956	982
16	Ayyanarkulam	954	934	920	963	44	Sindupatti	1059	927	953	1015
17	Vinnakudi	972	896	1040	1000	45	Perumalpatti	1003	965	906	1072
18	Kuravakudi	989	1031	854	1003	46	Thummakundu	939	914	978	964
19	Sadaichipatti	951	901	970	940	47	Veppanuthu	904	907	876	910
20	Poduvarpatti	961	906	930	1023	48	Ayanmettupatti	1054	1078	952	865
21	Pappapatti	868	917	956	817	49	Vagurani	935	924	904	932
22	Thimmanatham	917	897	933	914	50	Eramarpatti	885	951	985	945
23	Pudupatti(Anaiyur)	1000	938	911	978	51	Allikundam	878	851	901	874
24	Sirupatti	1026	846	761	1065	52	Manuthu	970	953	888	904
25	Krishnapuram	893	922	902	912	53	Jothinaickanur	975	997	992	896
26	Kattakaruppanpatti	1011	960	914	1040	54	Thummalapatti	993	1041	873	911
27	Budipuram	1075	1026	964	961	55	Usilampatti Town	998	936	988	998
28	Pottulupatti	1031	939	971	1000		**Usilampatti Taluk Total**	**945**	**923**	**929**	**959**

Source: Census of India, Tamil Nadu Series 1981 to 2011

Spatial Pattern of Female Literacy

Literacy serves as a crucial indicator for both social and economic development. It reflects the level of education within a population, impacting individuals' opportunities and contributing to the overall progress of society related to the degree of literacy. The female literacy is a vital component for the well-being and future development of individuals in a specific region. It not only empowers women but also plays a key role in shaping the overall socio-economic landscape and contributing to the progress of the community. The literacy rate is commonly defined as the percentage of literate individuals in the age group of seven years and above within a population.
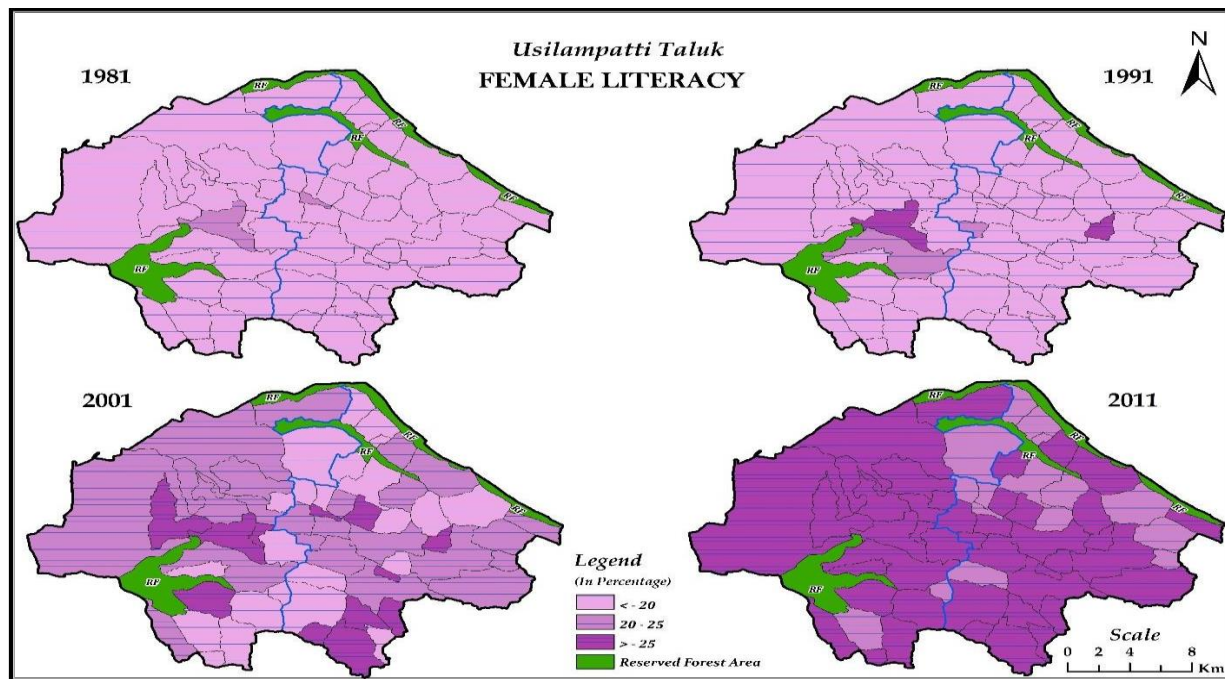
Fig No: 3

It provides a measure of the population's ability to read and write, serving as a key indicator of educational attainment and development. In the study area female literacy rate was 31.9% during 1981 and 35.7% during 1991, where as 39.8% and 42.7% in female literacy rate during 2001 and 2011 respectively. Female literacy rate in Usilampatti taluk has increased rapidly after 1991. Fig No. 3 represents that the village wise variation of female literacy rate in Usilampatti taluk during the decade 1981 to 2011. A Female literacy rates fluctuate over the study area and differ from one village to other village. From the figure it could be find out that

the study area has slowly increased the female literacy rate from 1981 to 2011.

Table. No. 3
Usilampatti Taluk
Spatial Pattern of Female Literacy

S. No	Village Name	Sexratio (Female/1000 Male)				S. No	Village Name	Sexratio (Female/1000 Male)			
		1981	1991	2001	2011			1981	1991	2001	2011
1	Uthappanaickanur	7.58	12.5	20.06	25.38	29	Usilampatti	12.77	11.83	18.93	29.33
2	Kalluthu	9.79	17.28	22.98	28.03	30	Sikkampatti	11.67	19.33	30.82	36.19
3	Panamoopanpatti	6.97	9.34	19.16	23.28	31	Meikkilarpatti	7.43	10.71	21.65	25.22
4	Eravarpatti	3.13	5.14	12.4	21.39	32	Keeripatti	5.97	4.57	19.92	27.74
5	Sakkarappanaickanur	9.84	11.76	22.88	25.29	33	Nadupatti	6.66	11.09	20.03	25.5
6	Vikkiramangalam	12.96	13.84	22.38	27.66	34	Seemanuthu	9.69	19.86	23.66	27.4
7	Mudalaikulam	4.19	10.1	18.54	24	35	Nakkalapatti	15.24	18.79	25.45	26.22
8	Panniyan	6.93	8.22	23.52	25.66	36	Doddappanaickanur	8.88	13.03	22.79	25.03
9	Kannanur	6.04	12.36	24.94	24.82	37	Nallathevanpatti	15.46	11.27	18.12	27.72
10	Pullaneri	10.62	13.35	23.46	24.04	38	Pothampatti	10.39	21.48	24.27	28.03
11	Karumathur	7.96	13	22.6	26.08	39	Sembatti	10.62	10.32	17.84	23.28
12	Kovilankulam	11.39	16.87	24.43	29.55	40	Ariyapatti	8.50	12.06	21.03	26.71
13	Jothimanickam	18.90	29.55	27.95	26.5	41	Nattamangalam	7.24	13.06	18.17	26.75
14	Valandur	11.98	18.14	22.59	26.33	42	Thidian	16.32	18.47	21.13	26.84
15	Kodikulam	7.22	14.58	15.21	27.56	43	Poruppumettupatti	12.15	14.26	26.78	27.96
16	Ayyanarkulam	9.24	15.52	23.93	23.61	44	Sindupatti	11.67	13.01	25.48	26.48
17	Vinnakudi	5.76	15.12	18	22.26	45	Perumalpatti	10.34	13.43	18.91	25.05
18	Kuravakudi	15.02	19.59	26.17	30.4	46	Thummakundu	17.20	16.62	26.51	27.28
19	Sadaichipatti	7.47	16	21.35	25.31	47	Veppanuthu	7.66	7.57	18.97	25.18
20	Poduvarpatti	6.25	12.64	15.06	23.55	48	Ayanmettupatti	12.94	15.36	17.24	20.39
21	Pappapatti	11.87	14.98	19.16	25.46	49	Vagurani	7.74	12.25	19.63	27.18
22	Thimmanatham	9.75	14.7	19.08	24.81	50	Eramarpatti	16.65	14.98	25.79	27.18
23	Pudupatti(Anaiyur)	9.48	11.06	19.5	23.42	51	Allikundam	4.32	8.33	14.73	25.92
24	Sirupatti	24.13	9.17	11.76	24.59	52	Manuthu	9.03	11.82	17.24	23.91
25	Krishnapuram	13.31	2.24	32.47	24.43	53	Jothinaickanur	8.41	15.62	22.19	27.75
26	Kattakaruppanpatti	10.65	12.92	20.98	26.6	54	Thummalapatti	27.06	19.28	16.23	30.47
27	Budipuram	9.48	16.24	23.75	26	55	Usilampatti Town	25.08	28.1	34.62	37.13
28	Pottulupatti	13.84	23.11	23.61	28.9		Usilampatti Taluk Total	31.9	35.7	39.8	42.7

Source: Census of India, Tamil Nadu Series 1981 to 2011

Occupational Structure

Occupational structure is a significant aspect of demographic characteristics, reflecting the sustaining capability of various economic statuses within a population. The distribution of occupations provides insights into the economic activities and livelihoods of the community. The study of occupational structure provides background knowledge for formulating future development plans and an important component of human resource assessment.

The social and economic development of a region is intricately linked to the number of economically active individuals, the quality of their work, and the regularity of their employment. The productive and stable engagement of the workforce is a key driver for sustainable development and prosperity. The women's participation in economic activities is not only essential for their personal advancement but also plays a crucial role in enhancing their status within society. Economic empowerment often leads to broader societal benefits and contributes to overall development. Occupational structure generally includes primary, secondary and tertiary workers.

Spatial Pattern of Female Primary Workers

The occupational structure indicates that high proportion in primary occupation, due to agricultural economy of the villages. The observation that female workers are more oriented towards the primary sector than male workers, attributed to societal factors and the low status granted to women, underscores the influence of social dynamics on occupational structure. The people engaged in agriculture, livestock forest, fishing and mining are commonly categorized as primary workers. The study area is rural in nature.   Hence the majority of the female population is engaged in primary activities. From table no. 1 it could be observed that 32.7% during 1981 and with 38.0% in 1991 it was increasing but female primary workers decreasing with 31.3% in 2001.

In 2011 it was recorded 33.7%. There are after 1991 female primary workers recorded with decreasing trend because this time period female infanticide started in the study area.   It

may be noted that the female primary workers is highest in the Chellampatti block because of this area is a plain region and rich agricultural land than the Usilampatti block. The increase in female workers in primary occupations, especially in response to rainfall variations and the development of irrigation and agricultural economic activities highlights the significant role environmental factors and economic changes play in shaping occupational trends in the study

area.

(Fig No: 4)

Table No. 4
Usilampatti Taluk
Spatial Pattern of Female Primary Workers

S. No	Village Name	Sexratio (Female/1000 Male)				S. No	Village Name	Sexratio (Female/1000 Male)			
		1981	1991	2001	2011			1981	1991	2001	2011
1	Uthappanaickanur	37.2	45.7	34.1	35.9	29	Usilampatti	14.7	48.3	27.4	32.8
2	Kalluthu	30.7	41.7	39.9	37.3	30	Sikkampatti	4.65	26.7	43.1	18.7
3	Panamoopanpatti	28.4	38.3	42.2	41.6	31	Meikkilarpatti	6.47	39.9	21.6	33.3
4	Eravarpatti	46	30.3	48.2	40.7	32	Keeripatti	24.2	46	45.2	40
5	Sakkarappanaickanur	47.3	42.8	46.3	41.6	33	Nadupatti	19	48	25.8	38.2
6	Vikkiramangalam	31.2	37	33.4	36.2	34	Seemanuthu	24	36.5	23.9	28.8
7	Mudalaikulam	41.1	39.6	42.1	43.5	35	Nakkalapatti	33.8	45	26.8	35.4
8	Panniyan	41.5	28.2	37.8	39.1	36	Doddappanaickanur	37.1	38.8	20.7	40.1
9	Kannanur	44.3	41.6	19.7	30.9	37	Nallathevanpatti	41.5	35.4	4	44.1
10	Pullaneri	34.2	39.6	40.5	37.2	38	Pothampatti	36.6	42.4	37.1	33.3
11	Karumathur	47.5	43.6	40.7	34	39	Sembatti	19.5	47.2	11.1	36.3
12	Kovilankulam	28.3	40.8	34	37	40	Ariyapatti	39.1	47.1	44	43.2
13	Jothimanickam	45.4	44.5	33.5	32.8	41	Nattamangalam	36	38.8	34.6	33.6
14	Valandur	41	43.6	37	35.9	42	Thidian	38.4	40.6	32.8	32.2
15	Kodikulam	45.4	39.5	43.3	43.7	43	Poruppumettupatti	48.2	46.2	47.1	35
16	Ayyanarkulam	23.6	46.6	43.6	44.2	44	Sindupatti	37.2	9.2	33	33
17	Vinnakudi	39.6	33.4	44.1	47.9	45	Perumalpatti	3.3	48.5	6.9	33.5
18	Kuravakudi	43.1	37.4	40.1	19.4	46	Thummakundu	14	38	34.7	34.1
19	Sadaichipatti	41.7	47.9	28.8	37.2	47	Veppanuthu	30.8	40.6	33.1	43.1
20	Poduvarpatti	23.7	49.2	40.9	50.2	48	Ayanmettupatti	51.2	42.5	25.6	47.7
21	Pappapatti	36.1	35.8	3.3	38.4	49	Vagurani	38.8	41	13.5	36.1
22	Thimmanatham	32.3	31.2	44.8	45.7	50	Eramarpatti	22	29.4	15.3	25
23	Pudupatti(Anaiyur)	42.2	46.4	36.6	45.7	51	Allikundam	38.9	42.7	38.4	46.1
24	Sirupatti	27.8	16.5	41.1	42.6	52	Manuthu	16.5	22.6	40.6	37.3
25	Krishnapuram	44	1.8	41.7	40.8	53	Jothinaickanur	23.3	17.4	42.2	43.2
26	Kattakaruppanpatti	49	49.6	39.3	48.1	54	Thummalapatti	37.1	48.5	35.1	36.9
27	Budipuram	44.4	44.7	26.8	46.8	55	Usilampatti Town	12.2	4.6	4.2	5.2
28	Pottulupatti	47.2	43.7	24.2	40.3		**Usilampatti Taluk Total**	**32.7**	**38.0**	**31.3**	**33.7**

Source: Census of India, Tamil Nadu Series 1981 to 2011

Spatial Pattern of Female Secondary Workers

The people engaged in house hold industry and other than house hold industry like manufacturing, industry, processing, servicing and repairs in household industry, construction works are typically categorized as secondary workers. Out of the total main workers, only the female secondary workers 0.39% in 1981, 0.23% in 1991 and 1.18%, 1.04 in 2001 and 2011 respectively are engaged in secondary workers. The pattern of female secondary workers in Usilampatti taluk is represented in the FigNo. 5. However some villages have a higher concentration of this category.   The female secondary workers have slightly increasing during the study period.

This study area have agricultural economy, due to the majority of the females are usually engaged in agricultural labours in the study area. This may be one of the reasons for the lower shares of female secondary workers in the study area.
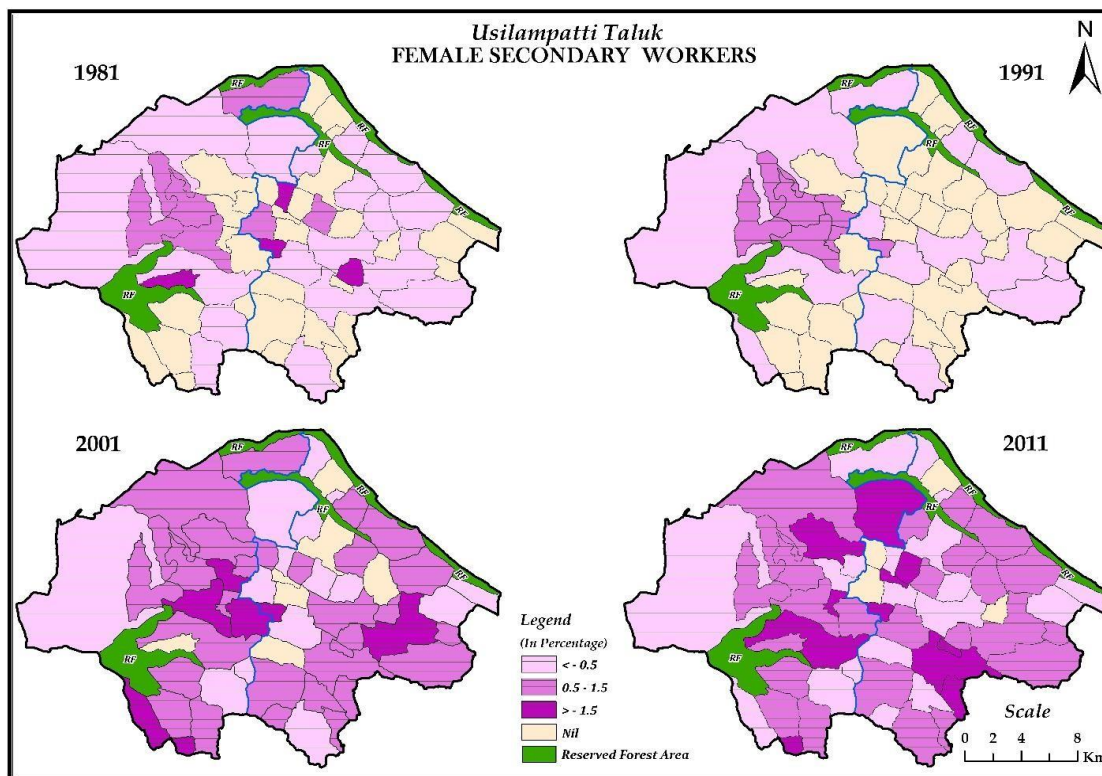
Fig No: 5

Table. No. 5

Usilampatti Taluk
Spatial Pattern of Female Secondary Workers

S. No	Village Name	Sexratio (Female/1000 Male)				S. No	Village Name	Sexratio (Female/1000 Male)			
		1981	1991	2001	2011			1981	1991	2001	2011
1	Uthappanaickanur	0.32	0.32	0.92	1.08	29	Usilampatti	-	-	5.01	0.75
2	Kalluthu	0.7	0.04	1.39	0.49	30	Sikkampatti	-	0.53	1.42	2.27
3	Panamoopanpatti	-	-	0.39	0.31	31	Meikkilarpatti	-	1.04	8.46	0.44
4	Eravarpatti	-	-	-	-	32	Keeripatti	-	-	0.86	0.11
5	Sakkarappanaickanur	0.15	0.15	1.43	0.63	33	Nadupatti	-	-	1.26	2.37
6	Vikkiramangalam	0.03	0.4	1.09	0.58	34	Seemanuthu	0.86	1.05	0.9	0.65
7	Mudalaikulam	0.18	-	0.67	1.02	35	Nakkalapatti	0.92	0.55	1.26	0.89
8	Panniyan	-	-	0.46	0.06	36	Doddappanaickanur	0.44	0.05	0.35	0.47
9	Kannanur	-	-	0.12	0.1	37	Nallathevanpatti	4.95	-	-	1
10	Pullaneri	-	0.13	1.28	1.21	38	Pothampatti	0.39	0.12	0.65	3.51
11	Karumathur	0.45	0.03	0.89	0.69	39	Sembatti	-	-	-	0.35
12	Kovilankulam	0.15	0.03	1.63	1.32	40	Ariyapatti	0.12	0.04	0.33	0.96
13	Jothimanickam	-	-	0.52	-	41	Nattamangalam	4.28	-	0.55	0.98
14	Valandur	0.15	0.27	0.67	0.18	42	Thidian	0.06	-	0.52	3.02
15	Kodikulam	0.07	-	-	0.96	43	Poruppumettupatti	-	-	1.45	2
16	Ayyanarkulam	0.07	-	0.9	0.66	44	Sindupatti	-	-	1.35	0.19
17	Vinnakudi	0	-	0.44	0.21	45	Perumalpatti	-	-	1.16	1
18	Kuravakudi	0.71	-	0.46	1.3	46	Thummakundu	0.1	0.13	0.49	0.59
19	Sadaichipatti	0	-	0.79	2.54	47	Veppanuthu	-	0.09	1.48	0.67
20	Poduvarpatti	0	-	-	0.38	48	Ayanmettupatti	-	-	0.4	0.48
21	Pappapatti	0.23	-	0.41	1.41	49	Vagurani	0.3	-	0.17	0.36
22	Thimmanatham	0.26	-	0.21	1.68	50	Eramarpatti	0	-	1.31	0.99
23	Pudupatti(Anaiyur)	1.63	-	0.2	0.4	51	Allikundam	0.23	-	0.97	0.78
24	Sirupatti	-	-	1.45	-	52	Manuthu	-	-	0.52	0.9
25	Krishnapuram	-	-	-	3.2	53	Jothinaickanur	-	0.2	1.87	0.33
26	Kattakaruppanpatti	-	-	-	0.16	54	Thummalapatti	-	-	2.87	9.48
27	Budipuram	0.79	0.33	0.28	-	55	Usilampatti Town	0.52	0.31	1.92	1.43
28	Pottulupatti	2.72	1.49	3.11	1.77		**Usilampatti Taluk Total**	**0.39**	**0.23**	**1.18**	**1.04**

Source: Census of India, Tamil Nadu Series 1981 to 2011

Spatial Pattern of Female Tertiary Workers

A person, engaged in economic activities such as trade, commerce, transport, storage, communication, railway, banking, insurance, public administration, and other services, excluding cultivation, agricultural labor, and household industry, is generally categorized as a tertiary worker. Fig No.6 clearly indicates that female tertiary workers are comparatively higher than over the study period that is 1.7% during 1981 and 2.0% during 1991, it further increased up to 6.6% and 6.9% during the year 2001 and 2011 respectively. In general more female tertiary workers are highly noticed in the southeastern part while comparatively lower concentration is found in the northern part of the Usilampatti Taluk because the variation of irrigation facility in the study area.

The increasing trend in the analysis of female tertiary workers over the last 40 years is attributed to improvements in educational and infrastructural facilities, resulting in higher female literacy levels and increased awareness among the female population in the study area. This highlights the positive impact of education and awareness on the participation of women in tertiary sector occupations.

Fig No: 6

Table No. 6

Usilampatti Taluk

Spatial Pattern of Female Tertiary Workers

S. No	Village Name	Sexratio (Female/1000 Male)				S. No	Village Name	Sexratio (Female/1000 Male)			
		1981	1991	2001	2011			1981	1991	2001	2011
1	Uthappanaickanur	1.84	0.92	3.23	3.45	29	Usilampatti	2.13	2.04	18.96	12.6
2	Kalluthu	-	1.7	3.12	2.31	30	Sikkampatti	-	3.74	6.16	9.06
3	Panamoopanpatti	1.72	1.28	3.55	2.46	31	Meikkilarpatti	0.37	2.16	7.04	7.06
4	Eravarpatti	1.14	0.66	0.66	2.45	32	Keeripatti	0.17	-	2.16	11.2
5	Sakkarappanaickanur	2.37	0.62	0.82	4.69	33	Nadupatti	1.72	0.93	11.64	3.97
6	Vikkiramangalam	1.18	1.21	5.47	5.93	34	Seemanuthu	0.43	2.16	7.67	13.1
7	Mudalaikulam	0.59	0.88	4.59	3.03	35	Nakkalapatti	1.82	1.77	11.31	6.47
8	Panniyan	0.44	0.72	4.18	6	36	Doddappanaickanur	1.24	0.99	6.7	3.17
9	Kannanur	0.85	0.54	2.96	1.18	37	Nallathevanpatti	0.12	0.58	6.05	1.7
10	Pullaneri	0.93	2.29	5	7.58	38	Pothampatti	1.66	1.55	4.95	8.75
11	Karumathur	0.29	1.23	4.08	8.66	39	Sembatti	1.28	1.3	7.24	5.04
12	Kovilankulam	1.44	1.95	3.7	7.37	40	Ariyapatti	2.17	2.52	4.83	4.55
13	Jothimanickam	-	1.4	3.66	3.42	41	Nattamangalam	3.4	1.16	6.46	5.09
14	Valandur	1.1	1.8	6.06	4.31	42	Thidian	0.8	0.93	2.79	7
15	Kodikulam	0.74	0.91	1.39	2.17	43	Poruppumettupatti	1.2	2.56	2.69	7.33
16	Ayyanarkulam	0.34	0.48	2.53	2.93	44	Sindupatti	2.42	0.33	6.51	6.65
17	Vinnakudi	0.44	3.31	0	1.68	45	Perumalpatti	2.51	3.78	12.79	5
18	Kuravakudi	0.71	1.93	2.63	9.35	46	Thummakundu	3.12	2.46	8.66	6.57
19	Sadaichipatti	3.6	1.77	4.97	4.6	47	Veppanuthu	1.29	0.85	3.53	4.07
20	Poduvarpatti	1.03	1.23	3.75	3.01	48	Ayanmettupatti	0.72	3.87	2.77	0.48
21	Pappapatti	2.27	2.24	10.3	9.72	49	Vagurani	2.19	1.03	2.96	7.9
22	Thimmanatham	-	1.22	2.97	1.5	50	Eramarpatti	2.3	1.74	26.94	5.17
23	Pudupatti(Anaiyur)	5.16	0.83	3.74	2.96	51	Allikundam	1.21	0.39	4.65	2.26
24	Sirupatti	1.58	0.98	-	1.47	52	Manuthu	1.68	1.27	3	2.14
25	Krishnapuram	-	1.89	4.55	2.4	53	Jothinaickanur	1.17	1.64	5.96	1.47
26	Kattakaruppanpatti	0.38	0.25	1.21	0.98	54	Thummalapatti	0.63	0.75	3.09	0.71
27	Budipuram	3.37	1.56	13.7	2.03	55	Usilampatti Town	6.55	2.87	15.68	18.6
28	Pottulupatti	0.16	1.77	12.4	7.32		Usilampatti Taluk Total	1.7	2.0	6.6	6.9

Source: Census of India, Tamil Nadu Series 1981 to 2011

Conclusion

The conclusion drawn from the overall discussion indicates that in the study area from 1991 to 2001, there was a decreasing trend in women's development. Additionally, the observation suggests that female infanticide was common during this period. This underscores important challenges and issues faced by women in the study area during that timeframe. During the year 1991 to 2001, the sex ratio, primary and secondary female workers were decreasing trend in the study area. This may be due to the increasing female infanticide and a lack of awareness among the female population. The field investigation reveals that NGOs played a crucial role in the formation of Self-Help Groups (SHGs), motivating women to join these groups, and creating awareness about education, thereby contributing to the prevention of female infanticide. This active involvement of NGOs is identified as the main reason for the observed increase in high sex ratio, literacy rates, primary workers, and tertiary workers in the year 2011. It underscores the positive impact of community initiatives in fostering socio-economic development.

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Domination over Nature: an Ecocritical Reading in Amitav Ghosh's *Sea of Poppies*

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Abstract

This paper speaks about the importance of conserving and preserving nature with the help of incidents and characters in the novel *Sea of Poppies.* In today's world, humans are depleting, mismanaging, and destroying nature and its resources at an unpredictable rate. Humans should understand that the earth does not only belong to them, it also belongs to other living beings. Humans in the name of colonization, war, industrialization and development interfere with nature, which creates many problems for both nature and humans, so people should stop interfering with nature and take steps to protect nature. They think that they are the only living beings in the world who have rights over the earth and this attitude of humans creates many problems. Most of the Amitav Ghosh novels speak about different environmental problems, capitalism and colonialism.

Keywords: Conserving and preserving nature, ecology, ecocriticm, destroying nature, poppy, colonization.

Ecocriticism speaks about the importance of interrelationship between nature, human beings and non-human living beings through literature. Earlier, ecocriticism did not flourish. Many authors wrote on issues such as racism, poverty, gender equality and so on, but they did not address growing issues such as pollution, garbage disposal in bodies of water and so on. Following the emergence of several green movements, many novelists began to explore environmental themes in their works. Ecocriticism examines how nature is depicted in fiction, poetry and drama. Deep ecology is an environmental movement founded on the idea that humans

must change their relationship with nature. The Norwegian philosopher Arne Naess coined the phrase Deep Ecology. It is a philosophy based on the human relationship with Earth and recognizes that all livings beings have intrinsic value. Deep ecology speaks about how humans should not destroy nature for their own greediness. The importance of nature and other non-human life, as well as the interdependence of human and non-human life, is emphasized in deep ecology.

There are many famous Indian nature-oriented writers. Some of them are Raja Rao, R.K. Narayan, Mulk Raj Anand, Amitav Ghosh, Anita Desi, Arundhati Roy, Ramchandran Guha, and Chandi Prasad Bhatt. Anita Desai vividly portrays the images of nature in her works. She is very fluent in German, Hindi and English. In the novel *Fire on the Mountain,* the author speaks about the relationship between humans and nature. This novel portrays how nature plays an important role in the characters life.

Amitav Ghosh is one of the important nature-oriented writers. Due to his passion for writing, he started writing literary works. *The Circle of Reason* revolves around a person who was suspected of being a terrorist. *The Shadow Lines* gives detail description about the lives of two families, one Indian and the other British. Both T*he Circle of Reason* and *The Shadow Lines* are well-known novels that have been translated into many languages. The *Hungry Tide* speaks about the relationship between nature and humans. Some of his most famous works are *The Calcutta Chromosome, The Glass Palace*, *Ibis Trilogy* namely *Sea of Poppies, River of Smoke, Flood of Fire* and *Gun Island.* Amitav Ghosh's famous nonfictional works are *In an Antique Land, The Ghosts of Mrs. Gandhi, Dancing in Cambodia at large in Burma* and *Countdown.*

Most of the Amitav Ghosh novels speak about capitalism and colonialism. In today's world, climate change is one of the important problems faced by people. Amitav Ghosh addresses problems like climate change in his novel. This has a great impact on the readers and makes them understand the adverse effects of climate change. His writing makes people understand the different environmental problems.

Sea of Poppies speaks about the impact of colonization on land and also portrays the problems faced by Indian peasants during colonization. *Sea of Poppies* gives a vivid picture of how opium cultivation has its effects on both living beings and nature. It also explores how Indian people lived in harmony with nature before India was colonized by British. The British

forced peasants to grow drug plant, exploiting both nature and human beings.

Throughout the novel characters travel through the sea. The author has given more importance to nature throughout the novel. Some significant characters in the novel are Deeti, Hukam Singh, Kalua, Raj Neel Ratta Haldar, Benjamin Burnham, Paulette Lambert, Jodu and Zachery Reid. At the beginning of the novel the author provides a vivid description of the rural village which is situated on the outskirts of Ghazipur and the lifestyle of the people living there.

> "The Ganga seemed to be flowing between twin glaciers, both its banks being blanketed by thick drifts of white-petalled flowers. It was as if the snows of the high Himalayas had descended on the plains to await the arrival of holi and its springtime profusion of colour" (Ghosh 1).

The above lines emphasize the importance of poppies throughout the novel. Ghosh speaks about how poppy plantations have a great impact on both farmers and nature. The British forced local farmers to plant poppies on their farm throughout the year which made the land unhealthy. Due to British colonization both nature and people suffered. British interference with nature was very high, causing problem for local farmers. Even in today's world, human interference with nature in the name of war, industrialization and development is rapidly increasing. This interference is dangerous for both humans and other living beings.

According to deep ecology, humans have no right to destroy nature except to satisfy their vital needs. Before British colonization local farmer lived in harmony with nature they fulfilled their basic needs from their own natural crop. However British forced local people to plant poppies and drugs on their land which create problem for both nature and human beings.

> In the old days the fields would be heavy with the wheat in the winter, and after the spring harvest, the straw would be useful to repair the damage of the year but now, with the sahibs forcing everyone to grow poppy, no one had thatch to spare— it had to be bought at the market, from people who lived in far away villages, and the expenses was such that people put off their repairs as long as they possibly could (Ghosh 29).

The above lines depicts the problems faced by farmers due to British colinization. Farmers were forced to plant poppies which were not profitable for them. Their income and lives were adversely affected by poppy plantation. Before British colonization farmers produced poppies in small quantities for medicinal purposes. Local farmers did not over exploit nature by planting poppies in large quantity. The farmers were forced to cultivate poppies throughout the year, disrupting their regular planting habit which made the land unhealthy.

Before colonization local farmers led peaceful and happy life. The local farmers were living in harmony with nature. However, colonizers greediness created problem for both nature and human beings.

> In the olden days, farmers would keep a little of their home-made opium for their families, to be used during illness, or harvest and weddings; the rest they would sell to the local nobility or to Pykari merchants from Patna.(Ghosh 29).

The British did not consider the well-being of local people or land they exploited the rich natural resources of India. Their only goal was to generate revenue through natural resources and the labour of local farmers. The character Deeti expresses that growing poppy is punishment for farmers. She speaks about how planting useful crops like wheat, dal and vegetables is easier than planting poppy. The British showed their domination over nature which created problems for both nature and humans. Their domination towards nature not only affected the life of local farmers but also had a great impact on the environment.

> the sweet, heady odour of the bleeding pods had drawn swarms of insects, and the air was buzzing with bees, grasshoppers and wasps; many would get struck in the ooze ... the sap seemed to have a pacifying effect even on the butterflies, which flapped their wings in oddly erratic patterns, as though they could not remember how to fly. One of these landed on the back of Kabutri's hand and would not take wing until it was thrown up in the air (Ghosh 28).

The above lines illustrate how opium affects nature. Animals, birds and small insects were also adversely impacted by the opium. poppy cultivation disturbed the harmony of nature affecting the land on which poppies were grown. The British was greatly profited from poppy

export. The whole flora and fauna were affected because of poppy production. The richness of the Indian soil was exploited by British.

Ganga River was also polluted because of opium industry the pot in which the raw opium bought by the farmers was thrown into the riverbanks of Ganga which polluted Ganga and also affected the aquatic organism in the river. The people were not able to drink water from Ganga. The poppy industry had a profound impact on the lives of many people, especially affecting farmers and those employed in poppy industry. Those who were employed in the opium industry regularly inhaled the opium smoke, resulting in health issues.

> Rare was the passer-by who could brave this mist without exploding into a paroxysm of sneezes and sniffles— and yet it was miracle, plain to behold, that the coolies pounding the trash were no more affected by the dust than were their young English overseers (Ghosh 91).

Agriculture is one of the important professions for humans to satisfy their vital needs like food, clothing and shelter. Humans should do agriculture without interfering or disturbing nature. Humans should take steps and measures to reduce the use of pesticides and fertilisers. Using fertiliser and pesticides has a great impact on soil, water and air. Agriculture is one of the most eco-friendly professions a human being can do. During colonization local farmers were compelled to cultivate crops that are not profitable for both nature and humans.

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Untouchability and Human Dignity in K.A. Gunasekaran's *Touch (Thodu)*

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Abstract

Touch is a translation of a Dalit Tamil drama *Thodu*, written by Dr. K.A. Gunasekaran and translated into English by Ravi Shankar. It deals with the theme of untouchability and human dignity. It also exposes the cruel nature of caste based discrimination encountered by Dalits for centuries in Indian society. It is published in *The Oxford India Anthology of Tamil Dalit Writing,* edited by Ravikumar, Dalit writer, critic and activist, and Dr. R. Alagarasan, Professor of English, University of Madras.   The author Dr. K.A.Gunasekaran was the prominent Dalit activist, folklorist, dramatist , theatre personality, the former dean of the School of Performing Arts, Pondicherry University and the director of International Institute of Tamil Studies. He was honoured with Kalaimamani Award by the Government of Tamil Nadu and Pondicherry, and Dalit Isai Kurisil Award from The Tamil Association of Canada.

Inspired by Left Movements, Progressive Writers' Movement and Marxian ideology, after Mandal Commission's Report, Dr. K.A. Gunasekaran focussed on the dalit point of view, ideology and theatre. He has done extensive research work on folklore, started his own performance troupe 'Thannane', toured across the globe spreading awareness of the problems of untouchability and the plight of Dalits in India. The rebellious song *Manusangada Naanga Manusangada*,(Human Beings, We are Human Beings) written by Tamil poet Inkulab and powerfully sung by Dr. K.A. Gunasekaran which became the anthem of the Tamil Dalit Movement. Dalit Theatre / Theatre of the Oppressed is a non-traditional theatre used to promote community centred problem solving, to create awareness of one's social situation, used worldwide for democratizing their own organizations, analyzing problems and preparing for action. Theatre of the Oppressed was established by Brazilian theatre artist and director Augusto Boal, to learn ways of fighting back against oppression in their daily lives. Street theatre is a

major tool for propagating the ideology and challenging the dominant discourse. Dalit theatre on the lines of the theatre of the oppressed is revolutionary, experimental, innovative and effective.

Touch deals with the theme of untouchability and its cruel nature. It explains how caste becomes a pollutant, mere touch of a human to another human pollutes, how untouchables / dalits struggle for survival and quest for human dignity, the nature of the caste based discrimination encountered by Dalits, the natives / inhabitants for centuries in Indian society, who live without land and peace of mind. *Touch* creates awareness and inculcates the audience/ readers to understand the problems of untouchability, makes the audience to touch each other and fulfils its purpose as a dalit theatre play. Caste plays a vital role in Indian society. Mere birth, caste determines ones destiny. Dalits are still subjected to extreme forms of socio- economic exclusion and discrimination. They experience humiliation, expose strong resistance of the so called higher castes, resulting in inhuman treatment, torture, rapes, massacres and atrocities. Dalit reality in India is not a mark of national pride but of international humiliation. The insults, indignities, inhuman treatment and atrocities against dalits continue unabated till date. To say that caste and untouchability are not relevant today is to deceive one's own conscience and refuse to see the reality.

Key words: untouchability, discrimination, dalit theatre, ideology, human dignity.

Touch is a translation of a Tamil Dalit drama *Thodu*, (2005) written by K.A.Gunasekaran, translated by Ravi Shankar, deals with untouchability and human dignity, exposes the nature of the caste based discrimination encountered by Dalits for centuries in Indian society. It is published in *The Oxford India Anthology of Tamil Dalit Writing,* edited by Ravikumar, Dalit writer, critic and activist, and Dr. R. Alagarasan, Professor of English , University of Madras.

K.A.Gunasekaran was the prominent Dalit activist, folklorist , dramatist and theatre personality, the former dean of the School of Performing Arts, Pondicherry University and the director of International Institute of Tamil Studies. He was honoured with Kalaimamani award by the Government of Tamil Nadu and Pondicherry, and received the Dalit Isai Kurisil Award from The Tamil Association of Canada. Inspired by Left movements his works laced with Marxian ideology. After Mandal Commission's report, he started focusing on the dalit point of

view, ideology and theatre.. He has done extensive research work on urban folklore associated with the Progressive Writers' Movement. He started his own performance troupe 'Thannane' and toured across the globe spreading awareness about the problems of untouchability and the plight of Dalits in India. His play *Bali Adugal (Sacrificial Goats)* was a precursor to the arrival of Dalit theatre in Tamil Nadu. His dramas *Sathya Sothanai*, *Thodu*, *Mazhi* , *Maatram* , *Varaivu Kadavuthal* , *Kanthan Valli* and his autobiography, *'Vadu' (The Scar)* are some of the important works . The rebellious song *Manusangada Naanga Manusangada* , (Human Beings, We are Human Beings) written by Tamil poet Inkulab and powerfully sung by K.A. Gunasekaran which became the anthem of the Tamil Dalit Movement. *Cheripuraviyal' (Dalit Lore*), *Dalit Arangiyal (Dalit Theatre). Sathiya Sothanai (Experiments with truth*, and *Pavalakkodi Alathu Kudumba valakku (Family Dispute)* are the significant works on folk arts, modern theatre history, criticism and music.

The term dalit is traced the root word 'dal' in Sanskrit which means to crack, split, broken, and crushed. Dalits are the group of people earlier known as untouchables subjected to social, political, economic, cultural and religious oppressions. They are maltreated by the so called upper caste people. They are called by different names such as Untouchables, Outcastes, Harijans, Scheduled castes, Chandalas, Depressed People, and Avarnas. According to dalit writers the term dalit is self chosen more political in nature. It is the symbol of change. Dalit Panthers use the term 'dalit' systematically rejecting all caste related positions of the former untouchables of the Indian society.

Dalit literature has achieved clearly recognized status of its own both nationally and internationally. It is undoubtedly global, it shares it thematics, tonetics, and aesthetics with subaltern literatures all over the world. It is glocal because it translates a distinct local dalit culture for global exposure and recognition. Dalit Theatre / Theatre of the Oppressed is a non-traditional theatre style used to prompt dialogue and promote community centred problem solving designed to create awareness of one's social situation, used worldwide for democratizing their own organizations, analyzing problems and preparing for action. Theatre of the Oppressed was established in the early 90s by Brazilian director Augusto Boal. It fosters democratic and cooperative forms of interactions among participants, designed for people who want to learn

ways of fighting back against oppression in their daily lives. He organized performances in the streets, factories, unions, churches, and the slums. He later worked in Argentina and developed 'Invisible Theatre' aimed at getting around the repressive political climate. Invisible theatre transforms public space into a public stage, drawn into a discourse about social oppression, and urged to take immediate action that might affect the scenario being played out, transforms monologue / dialogue between audience and stage. Participants determine their priority issues, problems from everyday life, in short scenes, as a vehicle for analyzing power, stimulating public debate and searching for solutions.   Performance can be an activity of cultural enrichment, experimentation, escape, social critique, therapy, education, and self-empowerment. Dalit theatre movement in Tamil Nadu invokes the history of Dalit culture and absorbs the theatrical elements of other cultures. It incorporates the unrecognised folk performance traditions and fused them with aspects of the invisible theatre, theatre of violence, native theatre and feminist and black theatre. It draws upon myriad influences, distinctiveness lies in exciting ideas and weaving the angle of human rights with a view of exposing the nature of the caste and its atrocities on dalits. It is classified into two categories, the first is activist playwrights stage their performances in the Dalit Cultural Festivals (Black Cultural Festivals in USA), and the performances in academic forums such as Seminars, or meetings on dalit issues by the students / scholars of the department of theatre arts in colleges and universities.

Dalit cultural festival was conducted first in Pondicherry in 1992. It has created a space for recognising dalit artists / activists and helped the growth of dalit theatre. The act of drumming the parai has incorporated as part of theatrical performances, challenging its perception as a demeaning occupation of a particular caste group. Dalti theratre is radically different from others. The elements of theatre activities make dalit community life, reflecting their protest, resistance and self confidence. Theatre provides a common platform for people to assemble and experience a work of art irrespective of their caste and religious differences. It plays a vital role in secularism and integration. Democratization of art owes in dalit folk tradition than to the theoretical tradition of the hegemonic. Folk performances are staged in available open spaces where no one is denied entry. Dalit theatrical activity is under the patronage of the Left-wing parties and the plays deal with issues related to poor peasants, unemployment feudal

exploitation, and land rights. Social reality plays deal with socil issues from the point of view of Marxist theories. Street theatre is a major tool for propagating their ideology and challenging the dominant discourse. Dalit theatre on the lines of the theatre of the oppressed was a revolutionary, experimental and innovative.

Experience of untouchability is the theme of the life of dalits in their creative works. Untouchability is not simply a remnant of the past but a deeply entrenched form of inequality which takes on new avatars in modern institutions. Dalit literature is directly involved with fundamental human issues and human values. It is concerned with basic secular values like liberty, equality and fraternity. Dalit literature aims at restoring lost human values of equality and brotherhood to deny its existence is to deny humanity and equality. The untouchables in India suffered for centuries but during the 20th century they became aware of their ignoble condition education and organised efforts brought slow but steady change. Dr. Ambedkar's role in this regard is unique in the entire history of the world he blew new life into dead souls of the millions of the depressed people. Dalit literature is very important in the context of human rights. It consists of every individual right to live with liberty and dignity, It is a birth right of each and every human being, it also rights as a citizen of a state and economic social and cultural freedom. Dalit literature is connected with social commitment of the writers the values of life as reflected in their works and the awakening sense of equality, liberty, justice and fraternity in the minds of the readers. In dalit literature human being is the centre; it glorifies human dignity and human equality and liberty. Dalit literature protests against the traditional values that have neglected human equality and liberty it is against injustice, it fights for and the victims. According to Dr. Ambedkar mere political freedom should be of meaningless, unless all people become equal and enjoyed human dignity. Social harmony in India remains a dream because of age-old traditional caste system, continues to dominate in one way or the other.

Touch deals with untouchability and human dignity, exposes the nature of the caste based discrimination encountered by dalits for centuries in Indian society. When the drama opens, a woman appears kneeling in the centre of the stage, covering the mud pot with her long hair. She slowly raises her head and looks at the audience with anguish on her face. She expresses her anguish as, "Oh my people! Born to me! My mind is now stricken by agony as ever before"

(168). This is the reason for her mental anguish. So many children have played happily in the lap of this mother and gone their way. She scoops up and scatters the sand from the pot. She says, "My people live with no peace of mind. And what progress can we think of when there is no peace of mind?" (168). She says that people came from Greece, Rome, Dutch, French and Portuguese. The British came and considered this land to be their own land, played around and went. All these people came but the real owners of this land live without any piece of mind. Dalits are the natives of India, by the entry and exist of different people, the natives or the inhabitants of this land became landless people. The woman rises, walks towards the audience with the mud pot, and her hair covers her face and sobs inconsolably.

She repeats and moves towards the actor standing on the opposite side, touches the actor standing in the northern corner, stands in front of him as if pleading for justice. She says, " criss-crossing these lands...toiling all the time ...these people have become dark skinned, it was their sweat that turned the forests and the hills into farming lands... now they have been swept aside in another direction"(164). Then she returns to the centre of the stage, and resumes her earlier posture. The sad background song picks up again, the four actors in four corners move to the front and stand in a row forming a curtain. Behind the curtain the woman leaves mud pot at the centre of the stage. When the music changes, the actors framed the curtain flap like wings, perform a heroic dance and their steps match the pounding of the big drums. Then the four actors perform cillambattam with elaborate steps and gestures but they are not exhausted. After the dance they form a tower like structure with their staffs and freeze. When the drums fall silent the flute picks up, the four actors starts moving in a circle without breaking the tower structure. The smaller and bigger drums start sounding along with the flute, the actors start earning their staffs around to shoe their courage in battle when it ceases, they resume the tower like structure.

Actor - 1 comes forward, faces the audience and says, "My Thatha was a mighty man ... an expert...he was a matchless dancer" (164). He looks at the other three but they laugh mockingly. Actor - 2, gestures them to stop and says, "You know me? My Appa taught cilambattam to all the people in this area.'(165). Actor - 3, swirl his cilambam forcefully in the air, slaps his thighs and brags. He further says, "If I announce who my father is, everyone here will be awe struck! (165). He strikes a gallant pose twirling his moustache, the other three look at

him laugh and ridicule. Actor - 4, laughs dramatically like a stage-hero and says, "It was my ancestors who invented cilambattam" (165). But the other three laugh at him. Then all the four jingle the anklets and make way to their corner and freeze. Actor1 points to the mud pot at the centre and says, "This pot... this mud pot...does any of you dare to touch it? (165), but the others become angry. Actor - 2 replies that the Actor -1 has mocked his valour. Actor – 3 says, "Who do you think you are speaking to? You have ridiculed my whole ancestry" (165). Actor - 4 bets, "If I touch this pot, will you shave off your moustache? Will you take a vow that you will never touch this cilambam again? You shouldn't show your face here again. Will you swear? Will you? (165). At this time, the sound of the flute music comes blowing in the wind. Exactly like the darkness setting in at the sundown, when they hear the flute, their body language starts to show their increasing distress. As if stricken by a great mental anguish, energy drains out of them, and facing their directions they slowly collapse on the stage, the flute music ends.

Actor -1 comes upstage, looks at the audience and says that the people cannot even touch this mud pot. This is the important story you know. It is a story repeated in the village day after day. He hurries to the field for work, picks up the mud pot and leave the stage. A song picks up in the background that means, "The pea nut prices have gone up, Karuppayi... I will make a pair of ear studs for you" (166). Listening to the song, someone is tilling the field. Two actors are the bullocks and they are harnessed to the yoke and plough formed by the staffs while the farmer does the tilling. While ploughing, the actor suddenly looks up at the sky as if he finds the sun unbearable. He shows signs of a seizure and limbs failing about, collapses to the ground frothing at the mouth. The bullocks move aside. A passerby sees this and panics. He studies the scene carefully and runs around calling out for help. He says, "Anyone there ... anyone? Ayya is having a fit. Please come and hold him down... save him" (166).

He realises that help is not forth coming but hesitates to touch the quivering body himself. After a moment's thought, he unties the plough from the yoke and makes the man on the ground grip it. The quivering slowly stops and he watches while the man slides into a faint. He turns away and bows before the ancestral god in his mind. He scoops up some mud and smears it on the man's forehead like sacred ash. Releasing the plough from the man's hands he calls him, "Ayya ...Ayya" (166). He looks around for anything that might help. He spies the mud pot on the

stage; he steps forward to pick up, but hesitates to touch it.   Then he picks it up and brings it to the man and splashes water from it on his face. The man revives and now asks for water. He raises the man's head to lay it on his lap and offers him the water from the pot. Thirst quenches, the farmer becomes more conscious. The man who saves him asks, Ayya... Ayya..., how are you feeling now, Ayya" (156).

Slowly the farmer understands in whose lap his head has lain. As realisation dawns, he moves away abruptly, agitated that the unthinkable has occurred, he raises his foot and kicks the man who gave him water. The farmer scolds and curses the man who has helped him at the time of danger,

> Why did you touch me?
> Are you allowed to touch me?
> Why did you touch me? (166).

The caste Hindus have psychological problem that a Hindu's public is his caste. His responsibility is only to his caste. His loyalty is restricted only to his caste. Caste is all in all. But the man explains to the farmer, "Ayya, you had a fit and fell unconscious. I thought you might die..." (166). Immediately the farmer replies, "So what if died? Why did you touch me?" (166).

Then the former rises, tries to hit him on the head with the pot. The man realises that this is the pot that has been touched by the other. He drops the pot and picking up the plough tries to hit the other with it because the plough too has been polluted by the man's touch, he throws away. The farmer becomes angry because he is polluted by the touch of the man. He has to face the people of the villager.

He becomes so serious and says, "How can I show my face to the villagers now! They will mock me for being polluted. Why did you touch me? Don't stand here. Go away?" (167). The farmer throws a fistful of mud on the man. When the man goes away, the farmer wails away. He ...... "A low- caste fellow touched me ... a low-caste fellow touched me" (167). Further, the farmer cries, caress his bullocks and calls them endearing them like, "My beloved, my precious one" (167).

The bullocks bellow then all of them bellow in one chorus which becomes a comical orchestra. Laughing together, they place the mud pot in the centre, start moving around the pot, the raised staffs maintaining the appearance of a tower. At the time flute music fills the air:

> In the backdrop,
>
> In the fourfold system
>
> We are not humans
>
> Worse than dogs we are
>
> We don't live here
>
> Outcastes we are.
>
> We have no relations here
>
> Outcastes we are
>
> We have no rights here. (167)

These words resound in the background. When the song is over, Actor - 1 comes towards the audience. The other three follow him. The sad song heard at the beginning of the play now picks up again. The four stand facing the audience forming a curtain. The woman is now back in the kneeling position with her long hair hiding the mud pot. When the voice and the notes from the flute mingle to make a sad composition, the four actors walk towards the four corners representing the four directions. The music stops and there is silent everywhere. The woman raises her arms and pleads, "Oh my people! I will rejoice only the day you unite" (167). Actor - 1 says, "Our people turned the forest into settlements... into cities...they harvested gold from the fields. The same people are now roaming around like refugees with no place to live, with no mat to lie on, no means to study."(167-168). Hindus love and touch animals like cow,dogs, cats and even pigs but never touch dalits because they consider mere touch will pollute. Actor -1 expresses that the mentality of caste Hindus as,

> Touch a goat
>
> Touch a cow
>
> Touch a dog
>
> Why, touch even a pig.
>
> But can you touch another human? (168).

Even today, there are villages where you cannot use footwear, where you can not touch even a glass tumbler of tea. Finally the woman announces that at least now, here, everyone can touch each other. The actors move forward, mingle with the audience and each starts to touch the other, on their shoulders, arms and hands.

The problem of untouchability is an old question but a new challenge. According to the report of Human Rights Watch-1999, Untouchability forms part of complex of discriminatory practices that impose social disabilities on persons by reasons of their birth in certain castes. Untouchability continues to be a widely prevalent and deeply entrenched part of rural life, important issue for social thought and action, no significant studies of untouchability. It is a burning issue in India which demands focus of all Indians irrespective of religion, caste and other man made laws. It prevents overall development of our nation in the international level. Can the elite and the intelligentsia answer? Do dalits are treated just like everyone else? Aren't the atrocities against dalits that are reported in the news? Isn't the problem of untouchability limited to so called states of India? Do all the policies and programmes help dalits overcome the stigma of caste?   All these questions are open for the intellectual intelligentsia of the caste ridden Indian society. Several such questions are to be raised, discussed and its solutions should be searched.

A campaign against untouchability requires to promote legal literacy and mobilise the masses for legal action to undertake strong penal and judicial interventions, guarantee to survivor, and initiate reorientation of the law and order machinery to create strict accountability in public sector and judicial reforms at all levels. Every sixth human being in the world is an Indian and every sixth person in India is a dalit. So, dalits can not be ignored, rejected, excluded, omitted, oppressed, suppressed and subjugated as it was done in the past. Dalits are ready to sacrifice anything for their lives to lead dignified life. But at the same time non-dalits invent and create unique and innovative powerful deadly ideas to dominate dalits. There is always a drift / conflict exists in the lives between two poles and produces unnecessary problems and atrocities affect the normal lives of the people. According to Dr. Ambedkar Caste system divides society into closed hereditary groups ranked by ritual status. Caste has killed public spirit. Caste has destroyed the sense of public charity. Caste has made public opinion impossible.

Untouchability is an extreme and particularly vicious aspect of caste system that prescribes stringent social sanction against members of castes located at the bottom of the purity

and pollution scale. Atrocities on dalits are innumerable and untold sufferings are recorded unconsciously by the state and central governments, kept in records which now take new sense of unrest in the society. Caste system remains a challenge for dalit quest for social justice and human dignity. The caste system undergoes transformation and consequently so does the practice of untouchability. Dalits are resisting and struggling against their subjugation, revolt against oppression and injustice. Dr.Ambedkar says," ... turn in any direction you like, caste is the monster that crosses your path. You can not have political reform; you can not have economic freeform, unless you kill this monster (177).

To conclude, Caste plays a vital role in Indian society. Mere birth, caste determines ones destiny. Dalits area still subjected to extreme forms of socio- economic exclusion and discrimination. They experience strong resistance from the so called higher castes, resulting in inhuman treatment, torture, rapes, massacres and atrocities. Dalit reality in India is not a mark of national pride but of international humiliation. The insults, indignities, inhuman treatment and atrocities against dalits continue unabated till date. To say that caste and untouchability are not relevant today is to deceive one's own conscience and refuse to see the reality.

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Existentialism in Salman Rushdie's The Enchantress of Florence

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Abstract

Salman Rushdie's "The Enchantress of Florence" completely interlaces empirical matters within a captivating shade of historic fiction. Characters struggle with identity, societal norms, free will, and the search of sense, emphasizing on the existential disasters and self-reflection. Rushdie unites magic practicality with existential viewpoint, thought-provoking outmoded storytelling to discover the complications of humanoid presence. The novel explores deeper into contemplation, the relationship of destiny and free will, and the pursuit for individuality. By the back-and-forth of these matters, Rushdie involvedly works for a thoughtful study of humanoid presence, enlightening the empirical perspectives of individuality, freedom, and the exploration for reality.

Keywords: Existentialism, Identity, Free Will, Magical Realism, Self-Examination.

Introduction

Salman Rushdie's novel "Enchantress of Florence" researches into a world where historic fiction intertwines with enchanted practicality to show an appealing description of storytelling, understanding the thoughtful philosophical idea of existentialism. Existentialism is a philosophy centered on "DASEIN" or what it is to be in the world. The philosophical promise is that temporality and historicality- situations in one's present that looks back to the past and anticipates the future- is inseparably a part of each individual's being; that the process of understanding something, involving an act of interpretation, goes on not only in reading verbal text but in all aspects of human experience; and that language, like temporality, pervades all aspects of that experience. In this fictional masterwork, Rushdie involvedly interlaces together

the existence of bright roles whose fights to deliberate the reflective spirit of empirical idea. The Enchantress of Florence is a 2008 magical-realist novel by Salman Rushdie. It expresses the story of a lovely and enigmatic woman named Angelica, who comes from Renaissance Florence to the Mughal court of Ruler Akbar in the 16th century.

The spirit of existentialism within the novel scrutinizes the person's mission for identity, the understanding of life, and the complications of survival. By the journeys of the characters', Rushdie intensely represents the characteristic empirical crisis that is existential dilemmas, inner issues, and the search of a profounder consideration of identity and determination. The story challenges old viewpoints, emphasizing on the relation among destiny and free will, individualism in contradiction of communal standards, and the never-ending mission for life.

By mixing the fundamentals of enchanted realism with historic surroundings, Rushdie's understanding of existential subject reassures deliberation on the humanoid understanding (Bayer 46), researching into the details of presence, self-discovery, and the exploration for individual reality within a tapestry of magical storytelling.

Characters' Identity Crises and Self-discovery

The novel starts with the entrance of a European tourist at the court of Akbar. The tourist demands himself Mogor dell'Amore, the Mughal of Love, and he says to be a lost relative of Akbar's, born of a banished Indian royalty family and an Italian from Florence. He says Akbar the story of Angelica, and the ruler was instantly enchanted. Angelica was defined as being extremely good-looking, with dark skin and penetrating black eyes. She is likewise said to have magic powers, and the persons of Florence are really under her spell. Though, her loveliness and influence also appeal the consideration of those who would search for exploiting her.

In the novel, the characters grappling with individuality crises and board on philosophical expeditions of self-discovery, capturing the main spirit of existentialism. The description develops by a drapery of roles directing complex nets of individual missions, opposing complicated problems, and looking for a profounder consideration of own life and existence.

The novel presents characters, like the mysterious Niccolo Vespucci, who makes stories of his roots, emphasizing on the changeability and built a nature of individuality. Vespucci's overstated stories deliberate on the concept that identity is not just defined but can also be created and redesigned by stories, reflecting existentialism's breakdown of the personal kind of existence.

Furthermore, characters such as the Mughal emperor, Akbar engage with the problem of his imperial ancestry and the heaviness of communal prospects. His mission for self-discovery reveals the fight to search for his distinct identity separately from the fated character made by his legacy and influence, exemplifying the existence issue among outer impacts and separate activity.

In this pursuit for identity, Rushdie's roles face phases of complication and uncertainty. The novel explores into the complicated kind of the personality, enquiring if the identity is inherent or a growing concept formed by individual practices and social impacts (Souissi 45). It deliberates on the empirical belief that our own is not inert but fluid, theme to the person's insights, practices, and communications.

By numerous persons' journeys, Rushdie understands the importance of self-discovery as a constant and active procedure, highlighting that sincere selfhood arises from self-analysis, independence, and the conflict of empirical doubts. The characters' different ways to the self-fulfillment help as a suggestive replication of existentialism's essential views, exposing the complex kind of the humanoid mission for identity and the continuous chase of considering one's position in the world.

The Concepts of Fate and Free Will

The novel, directs the complicated shade of existential matters, specifically the roles' thoughtful problems with the perceptions of fate and free will. The story creates a matter that asks the deterministic services of fate in contradiction of the redeeming activity of free will (Harilekshmi 11), capturing the empirical dilemma confronted by roles in their search of independence and perception.

The novel presents roles knotted in the complicated theme among fated destiny and separate selection. The Mughal emperor, Akbar confronts the burden of his determined work as a leader in contradiction of his wishes for individual activity. His inner struggle reflects the empirical conflict amongst capitulating to a predetermined purpose and the wish for freedom. The characters' activities and choices are perceived as a continuous cooperation among these contrasting services.

Rushdie's description confronts the idea of destiny as an irreversible strength, signifying that people own the control to form their purposes of life by their works. The characters' activities help as a resistance in contradiction of the deterministic restrictions executed by the community or determined works (Majumder 81), highlighting the existentialist certainty in the implication of individual independence and free will.

The novel deliberates the existential viewpoint that liberty of selection, regardless of possible outer burdens or fated ways, is vital in demonstrating one's true self. Characters' missions for individual activity amongst the apparently determined conditions underline the empirical dilemma among getting fate inertly or dynamically proclaiming free will and independence.

The novel's breakdown of fate and free will shows a complicated relationship of these ideas, highlighting the characters' conflict to direct the pressure among prearranged purposes and the freedom to form their individual ways (Vallury 110). The existential inspection about these matters emphasizes on the complicated kind of humanoid presence, the continuous conflict to demonstrate one's fortune among the pervasive social and individual impacts.

Individualism and Defiance of Societal Norms

The matter of individualism and the opposition of communal standards explains as a vital perspective of the existentialist study within the story. The roles in the novel face communal standards and predefined works, showing a loyal individuality that encounters the recognized communal concepts and authorize the changing aspects.

Rushdie's characters, specifically the mysterious form of the enchantress, holds a separate wisdom of independence, rejecting to adapt social prospects. They avoid following to determined works or stick to outmoded standards, declaring their exceptional individualities amongst the strong formation of their corresponding cultures. The enchantress particularly encounters traditional gender customs and control assemblies, representing an identity that challenges the conservative parts discussed by the society.

The description discloses roles who rebel in contradiction of the communal constrictions that is obligatory upon them, struggling for independence and self-definition. They avoid to be restricted by social prospects, looking for forego their individual ways (Ali 65). This matter of individuality emphasizes on the existentialist idea of the significance of individual activity and the pursuit of legitimacy on the earth where social standards frequently command performance and character.

The characters' confrontation of communal standards indicates a refusal of prearranged works, proclaiming the right to define their own destinies. Rushdie's portrayal of these characters illustrates the empirical trust in separate accountability for forming one's individuality and purpose (Bayer 50). The novel highlights the vitality of individual independence and the pursuit for self-worth in the aspect of social burdens and standards that search for restricting and describe entities.

By the person's defiant states and rejection to obey, Rushdie underlines the empirical knowledge that honest selfhood is accomplished by confronting compulsory standards and agreements.

The story also tracks a secretive traveller who reaches in the law court of the Mughal Emperor Akbar in the 16th-century India, demanding to be the missing nephew of the ruler. This stranger, identified as the "Enchantress," fascinates the ruler and his court with his stories of detached lands, magical beings, and the influential women who form the history.

Pursuit of Meaning and Purpose in the Narrative

The novel deliberates the existentialist concepts by numerous roles who embrace with the exploration for recognition, implication, and the search for self-discovery in an earth often represented as confused and strange.

The character, the Great Akbar, exemplifies the grapple for sense and determination. His experiential mission stays around the thought-provoking responsibility of governing a kingdom, his metaphysical inspections, and the continuous research for individual individuality. Akbar's uncertainty about the well-known standards and communal constrictions deliberates on a profound empirical mission for uniqueness and honest consideration (Majumder 90). His chase of information and perception is an expedition to demonstrating his individual spirit beyond the communal concepts that is compulsory upon him.

The characters present in the novel confront the empirical dilemma of making a sense in an earth that appears to be unpredictable and indeterminate. Rushdie represents a world where persons must struggle with their presence and describe their individual persistence amongst the confusion and uncertainty nearby them. Roles such as Qara Koz, the enchantress herself, exemplify the issue in contradiction of prearranged works, looking for independence and their individual story in an earth of preordained destiny and social constrictions.

The novel discovers themes of storytelling, identity, love, and the unification of reality and fantasy. As the story unfolds, it changes among the enchanted world of the Enchantress and the party-political machinations of Akbar's court. The characters struggle with their own destinies and the influence of storytelling on the sequence of past.

Existentialism in Rushdie's work faces several issues with the concept of prearranged purposes or secure individualities. It highlights the liberty to make one's purpose of life, to revolutionize in contradiction of conventional standards, and to look for one's certainty in spite of the disorder (Vallury 122). The roles' chase of sense and determination in "The Enchantress of Florence" is evidence to the humanoid attempt to proclaim separate activity and look for

implication in an earth that frequently appears to be empty for essential sense, reflecting existentialist viewpoint in a fine and ironic story.

Examining the Characters' Existential Dilemmas

The encapsulation of the spirit of existentialism in their separate pursuits and problems within a complicated and undefined world.

Akbar the Great exemplifies the empirical issue of self-fulfillment and liberty. His experiential issue is demonstrated in his research for individual uniqueness and the search for discover the self. Akbar faces the restrictions of his communal work as a ruler and queries the reputable standards, requiring a profounder consideration of himself beyond his status. His desire for true acquaintance and understanding in life deliberates on the empirical mission for individual genuineness and independence.

The enchantress Qara Koz directs an empirical fight for activity and self-definition. She fights for prearranged works and communal prospects, fighting in contradiction of the restraints executed upon her as a lady in that age (Harilekshmi 11). Qara Koz search for independence, thought-provoking destiny and struggling to form her purpose, therefore exemplifying the spirit of experiential autonomy and the authority to make one's story.

Existential problems are also obvious in other roles. Characters such as the Englishman, who confronts the encounter of values and the doubts of his individuality, reflect experiential apprehensions about the kind of humanoid presence, social problems, and the hunt for fit in in a developing world.

Rushdie lack's existential matters by portraying characters' inner struggles and their conflicts to look for meaning, determination, and genuineness in an earth filled with indecision and confusion. The empirical dilemmas confronted by these characters underline the knowledge of separate accountability in demonstrating one's self and forming one's purpose of life (Ali 67). By these characters, Rushdie explains the complicated shading of existentialism, emphasizing on the vitality of separate activity, liberty, and the persistent chase of exploring diverse paths and individual genuineness among an earth troubled with complications and doubts.

Magical Realism and Existential Theme

The novel's empirical matters are complicatedly intertwined by the story by means of the practice of magical realism. Rushdie mixes the unusual with the ordinary, clouding the outlines among realism and the fantastic to research into empirical studies.

The novel's background of the Renaissance Europe and the Mughal Empire allows Rushdie to discover humanoid presence, awareness, and the hunt for one's true self. The characters' experiences and the outbreaks in the book often encounter the limitations of realism. This technique permits Rushdie to portray a bright representation of empirical trouble, selection, and the pursuit for explanation amongst unusual conditions.

By the characters' connections with magical basics and paranormal incidences, Rushdie discovers their inner fights, their desire for drive and implication, and the interaction among determination and free will (Souissi 63). The magical realism helps as an implement to enlarge empirical queries that review the actual spirit of humanoid presence.

The novel's mixture of historic evidences with creative storytelling makes a painting where characters face their fates, faces several problems with their characters, and search for their residence in the earth. The mixture of fascination and realism helps to brighten the complications or the darkness of life, deliberating on the randomness and spiritual features of presence itself.

By putting together, the unexpected with the ordinary, Rushdie applies the magical realism to shed light on empirical matters, appealing some person who reads to consider the anonymities of life, independence (Vallury 116), and the humanoid search for meaning and implication in an earth where genuineness and fascination co-occur. The usage of magical realism helps as a lens by which the role's empirical dilemmas are strengthened and inspected, inspiring readers to anticipate the profounder logical foundations of human presence.

The Role of Introspection and Self-examination

Introspection and self-examination have a momentous part in demonstrating empirical matters. The characters, particularly the character, discover their individual characteristics, opinions, and determination in an earth where realism is frequently distorted by magical realism.

Throughout the story, the roles involve in a profound self-examination, asking their presence and the implication of their activities. The protagonist, Niccolo Vespucci, points on an expedition that's not only topographical but also profoundly inner, representing a search of introspection. Vespucci's research for recognition, belonging, and consideration of his residence in the earth reflects empirical apprehensions (Bayer 54). His thoughtful mission frequently reflects the social wish to consider one's persistence and meaning.

Furthermore, Qara Koz, the enchantress, a mysterious form of fascinating authorities, involves in contemplation about her capabilities and restrictions, resounding wider empirical investigations about the humanoid situation. Her introspection queries the kind of authority, destiny, and separate activity.

Rushdie applies self-analysis to discover the empirical sorrow of the roles, deliberating on their grapples, uncertainties, and research for explanation (Vallury 113). The characters' thoughtful kind underscores their empirical dilemma, helping as an application to carry the complex workings of humanoid awareness and self-analysis.

The mixture of reflective fundamentals with the wider empirical matters in "The Enchantress of Florence" demonstrates Rushdie's effort to research into the humanoid soul. By the roles' thoughtful procedures, the novel reflects the worldwide chase of considering oneself in the complicated shading of life, including profundity to the experiential queries that infuse the story. This thoughtful lens permits readers to submerge themselves in the role' empirical expeditions, pleasing them to anticipate the important perspectives of presence and the mission for introspection and individual understanding.

Portrayal of Existential Crisis and Character Development

The novels masterfully represent empirical disasters and character growth. The characters grappling with important queries about their presence, principles, and determination, portraying the typical trademarks of an experiential disaster. As they direct by an earth entangled with enchanted and realism, Rushdie accurately follows their development and alteration, demonstrating a deep progression in their characteristics and consideration of life.

The characters' development reflects the complex kind of empirical study. Niccolo Vespucci, for example, experiences a deep individual alteration, on behalf of a journey of self-realization in the confrontation of indecision (Harilekshmi 11). Rushdie's representation of empirical problems entangled with the roles' growth permits readers to observe their development, offering the understanding into the complication of the humanoid situation and the mission for sense and individual development.

Interplay of Existentialist Ideas in Rushdie's Storytelling

Salman Rushdie interweaves numerous existentialist concepts throughout "The Enchantress of Florence." His story exemplifies the empirical chase of sense, independence, and the exploration for a person's reality. The characters' quandaries and missions reflect the existentialist matters, discovering the complicated phases of uniqueness, liberty, and the implication of individual selections in forming their vocations (Ali 67). Rushdie mergers magic practicality with empirical ideas, providing readers a complex depiction of life's doubts, the grapple for self-fulfillment, and the deep influence of separate activity on one's presence. By this interchange, Rushdie makes outmoded storytelling by permeating it with existentialist fundamentals, making a story that directs the complicated grounds of humanoid presence, trust structures, and the chase of genuineness and determination.

Conclusion

Salman Rushdie's "The Enchantress of Florence" craftily entangles enchanted practicality and empirical matters in a form of historic fiction. By roles' expeditions grapple with individuality, free will, and communal standards, Rushdie explores into empirical queries. This

interaction tests normal storytelling, providing a complex search of the complications of presence and the chase of the truth.

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Pictorial Step-By-Step Exploration of 'Open Knowledge Maps': The Free AI Tool to Get Categorized Academic Reviews

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Introduction

The Artificial intelligence is revolutionzing the way the researchers think, conceive, carry out and complete their research activities. Starting from choosing the title, collecting the reviews, framing the methodologies, selecting the sample, writing the content, correcting the content, paraphrasing the content, analyzing the data, visualizing the data, suggesting new areas and formatting the references, AI tools have come into the picture. Both commercial and free versions of various AI tools are available to the research community. AI tool aggregators like topai.tools list hundreds of AI tools for research work.

We have AI tools for conducting surveys, interviews in multiple languages, setting alerts, extract and summarize research papers, generate citations, analyze data, review the related literature, digest and generate feedback on various sections of research papers, categorize the scholarly content, provide chat-like interface, create mindmaps and flowcharts, build storyboards, create images and images based on description, answer simple to complex questions etc. We have to select the right AI tools for right purpose. We have to know and understand the limitations of the proposed AI tool in terms of our work perspective. Our critical thinking and creative ideas should always go with the use of these AI tools. The present chapter talks about the use of one such free AI tool namely 'Open Knowledge Maps'.

Review of Literature

AI tools have been used by the faculty members, researchers, research scholars, students and all members of the academic for teaching, learning and research purposes.

The increasing involvement of AI in the writing, creation, and overall production of research papers has gained significant attention within the research and academic communities, and health organizations over the past year (Li et al., 2023; Alia et al. 2023)

The study also found that ChatGPT can be used to generate topics for essays, which could make it easier for students to find topics they are familiar with and can write about (Tangermann, 2023; Ventayen, 2023).

ChatGPT and other LLM models offer numerous possibilities, such as condensing lengthy articles or generating initial versions of presentations that can be refined later. In addition, they have the potential to assist researchers, students, and educators in brainstorming ideas (Roose, 2023).

The qualitative researchers are increasingly using AI for a variety of research tasks, which has fundamentally altered the research process. AI in various forms can be a useful means and tool for advancing our knowledge and contributing to theory development (Christou, 2023).

AI also assists academicians, researchers, and students with content generation, analytical calculation, and writing, including thesis preparation and publishing research articles in academic journals. AI assists academicians and students in developing better content, illustrations, grammar, and spelling and refines the word choice and style of the research paper. AI uses Natural language to analyze texts and provides recommendations to strengthen the arguments in the research papers.AI tools help to search the relevant research areas, and topics, identify key concepts and research gaps, generate literature review, and generate citations and bibliographies in the desired citation style. AI aids in research and knowledge management. AI helps in analyzing complex data (Monika et al., 2023).

Artificial Intelligence (AI) has revolutionized the field of education and research by providing new and innovative tools that can help academia and researchers in various ways. AI-based tools offer many benefits such as personalization, automation, accuracy, and efficiency. AI-based tools have the potential to transform education and research by providing new and innovative ways to learn and research. AI-based research utility tools have the best features for ease of time and efforts for researchers and technical communication but they have come with

equal potential negative effects as well, that are harmful to science and technology (Bankar and Lihitkar, 2023).

While AI-based technologies can streamline routine research processes, they also risk contaminating the scientific research landscape and undermining the credibility of authentic works produced by other authors. Nevertheless, it is important to recognize that integrating AI in research should aid rather than replace human creativity (Chubb, Cowling & Reed, 2022).

Researchers now have access to new avenues for investigating complex phenomena and generating valuable insights thanks to the ability of AI to divulge useful information that can be used to build theoretical discussions and analyze and interpret large volumes of information (Borges et al., 2021; Hwang et al., 2020; Xu et al., 2021).

AI models can review draft theses and provide feedback on literature gaps, evaluate if research questions and claims are properly supported by evidence, ensure logical flow and transitions, and highlight areas needing revision or lacking citation (Allen et al., 2020).

AI tools for Research

Though the list is very long, a handful of tools used by most of the academia are given below:

- Semantic Scholar
- Scite.ai
- Research Rabbit
- PaperPal
- SciSpace
- Scholarcy
- Jenni AI
- Elicit
- Consensus
- ChatPDF
- Typeset.io
- EvidenceHunt
- Grammarly
- Quillbot
- Trinka
- OpenAI
- OpenRead
- Humata AI
- Tutor.AI
- Perplexity AI

Open Knowledge Maps

Open Knowledge Maps is the largest visual search engine for research in the world. On https://openknowledgemaps.org, users can create knowledge maps of research topics in any

discipline. Knowledge maps provide an instant overview of a topic by showing the main areas at a glance, with relevant papers and concepts attached to each area (Open Knowledge Maps, 2020).

Head Start, the underlying software library, is an open-source knowledge mapping framework developed by the Open Knowledge Maps team. Head Start provides an interactive, web-based interface and comes with a backend that is capable of automatically producing knowledge maps from a variety of data, including text, metadata and references. Since 2016, we integrated a range of data sources from the Open Science ecosystem (BASE, PubMed, OpenAIRE, DOAJ, and PLOS) and created customized adaptations for diverse user requirements (our web service, VIPER, CRIS Vis, LinkedCat+).

Head Start follows a client-server architecture with a user-facing search interface and map frontend based on JavaScript, a service and API layer based on Apache/PHP, a natural language processing/machine learning backend based on R, and an SQLite database for the persistence of map representations. To create a knowledge map, we first retrieve the metadata of a set of documents from the respective database (e.g. the most relevant documents for a search term). Then, we compute the map representation in four steps:

Map Representation in 4 Steps

1. Documents are preprocessed by cleaning metadata like title, abstract, author, and journal by removing punctuation, filtering stop words, transforming to lower-case and stemming.

2. The similarity of documents is then calculated based on the cosine-similarity of cleaned metadata.

3. The documents are then clustered into groups with Ward's method of minimum variance, and placed on the map with non-metric multidimensional scaling.

4. Finally, clusters are labelled by taking the top three n-grams of keywords, weighted by Term Frequency - Inverse Document Frequency (Open Knowledge Maps, 2020).

OKM Architecture

The Head Start Architecture shows how openknowledgemaps work. We enter the search terms in the Search Interface. The server searches for the terms using Database APIs, Head Start Natural Language Processing and SQLITE query. The results are delivered in a unique style to the Head Start Client.
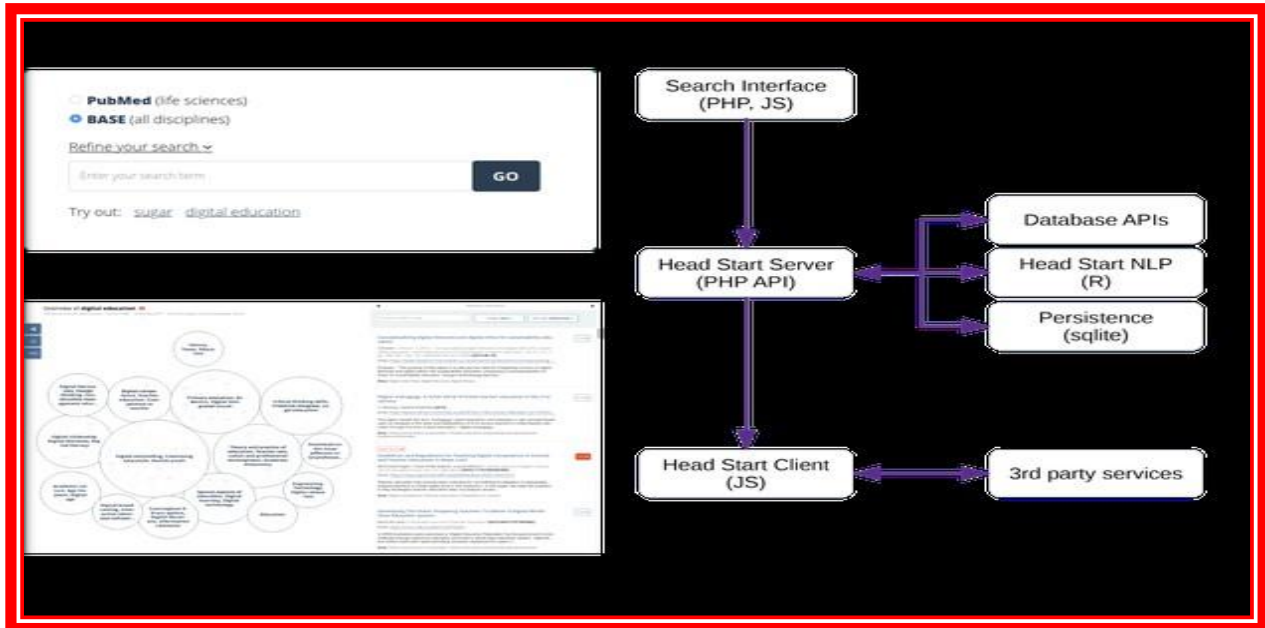
Head Start Architecture (Source: https://elifesciences.org/labs/ef274c83/open-knowledge-maps-a-visual-interface-to-the-world-s-scientific-knowledge)

How does OKM work? The figure shows clearly how OKM works.

Step 1 : A knowledge map gives you a topical overview for your search query based on the 100 most relevant documents matching your query.

Step 2: Text similarity is used to create the knowledge maps. The algorithm groups the documents based on many words that are common among them.

Step 3: The purpose of visualization is to give you a head start on your scholarly search. We can find out relevant areas at a glance and documents related to them.

1: Go to Google and type Openknowledgemaps. Click the first result '
https://openknowledgemaps.org' to reach the site.
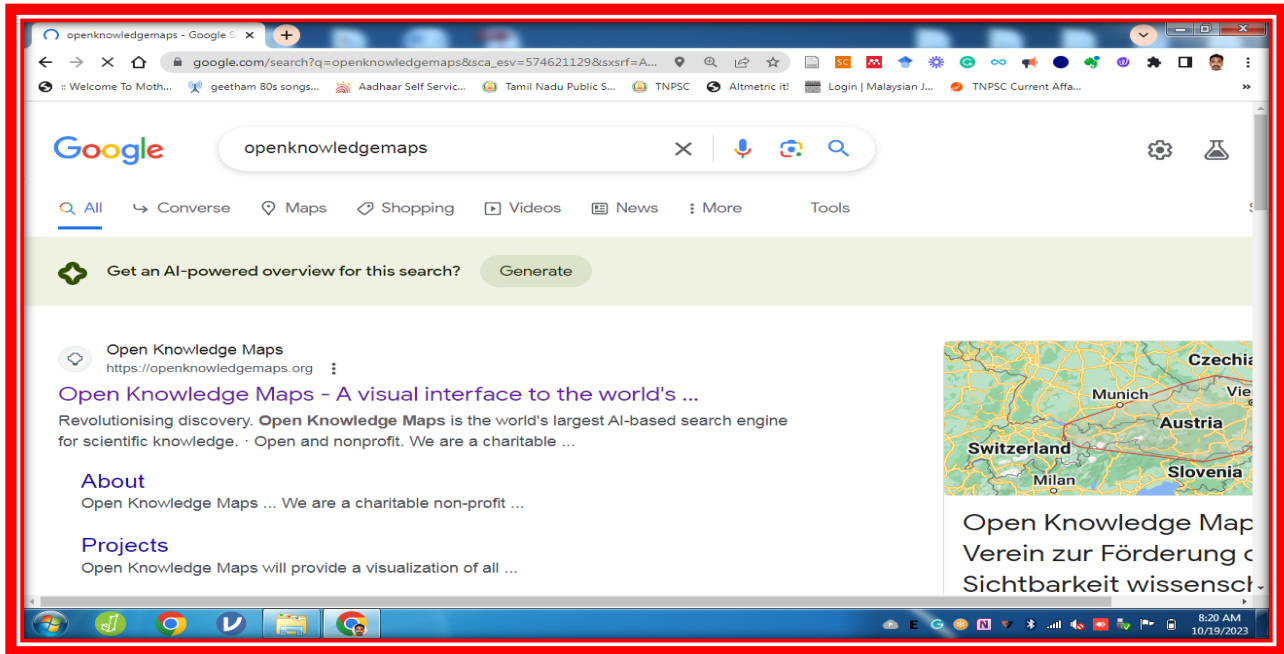
2: Open Knowledge Maps provide us two possibilities. We can either search for the research papers from PubMed database or BASE. If you are interested to get papers about life sciences, medicine, health, biotechnology, diseases etc, then PubMed is the ideal choice. If you want to get research papers across all disciplines, then you may try BASE – Bielefeld Academic Search Engine – that is multidisciplinary in nature and searches for scholarly resources from the chosen content providers.
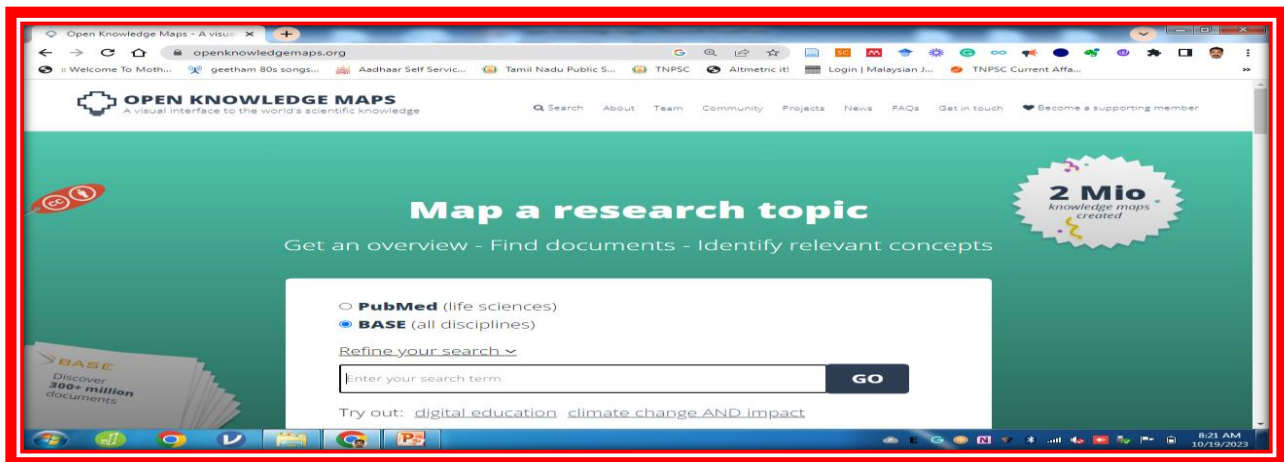
3: I have selected ' BASE' by clicking the relevant radio button. I have entered the following keywords: "Digital Literacy skills of school students". Then, click ' Go'.
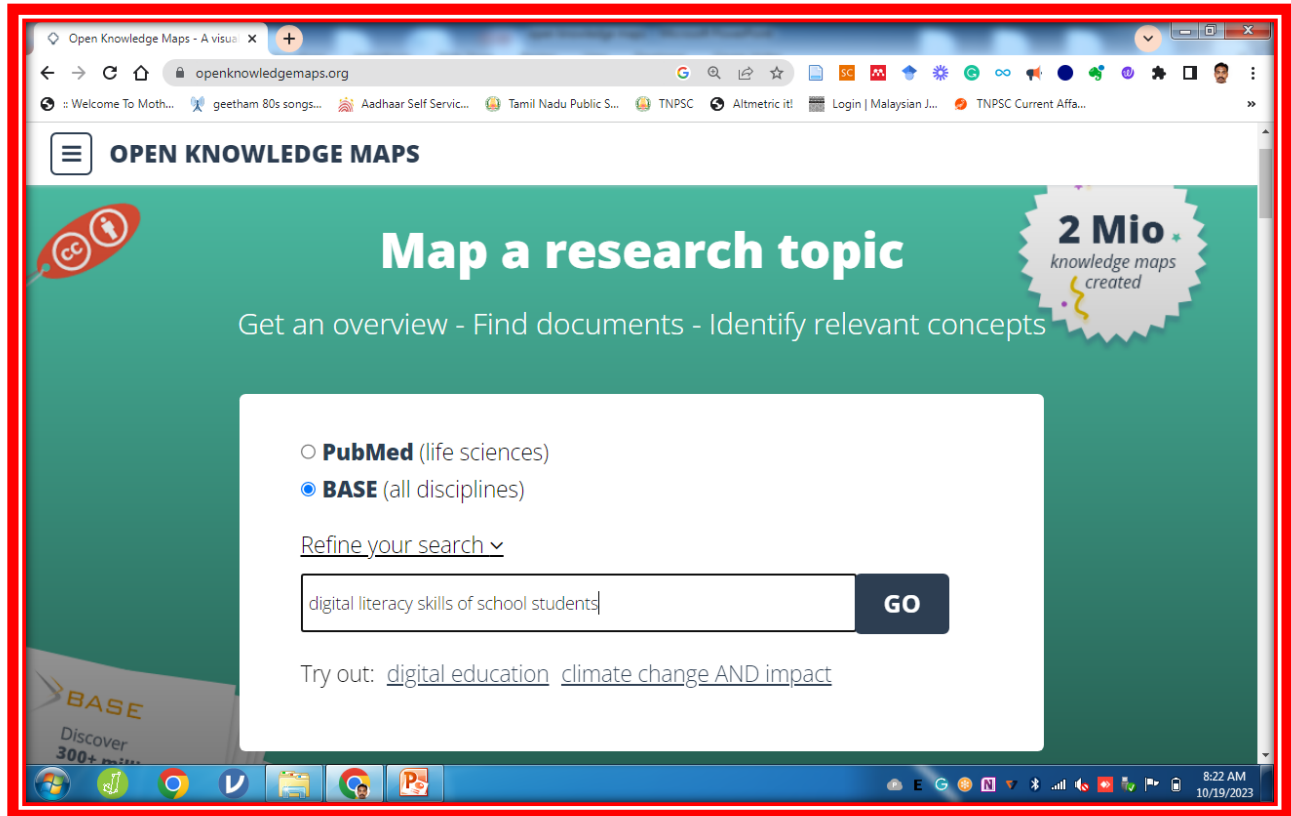
This will create a knowledge map to get a topical overview of research on the keywords entered based on 100 most relevant documents that best match your search query. They use the 'Text Similarity' algorithm to find out the 100 best documents based on the terms that frequently occurred in those research papers.

4: The screen shows that a knowledge map on ' digital literacy skills of school students' is getting ready.
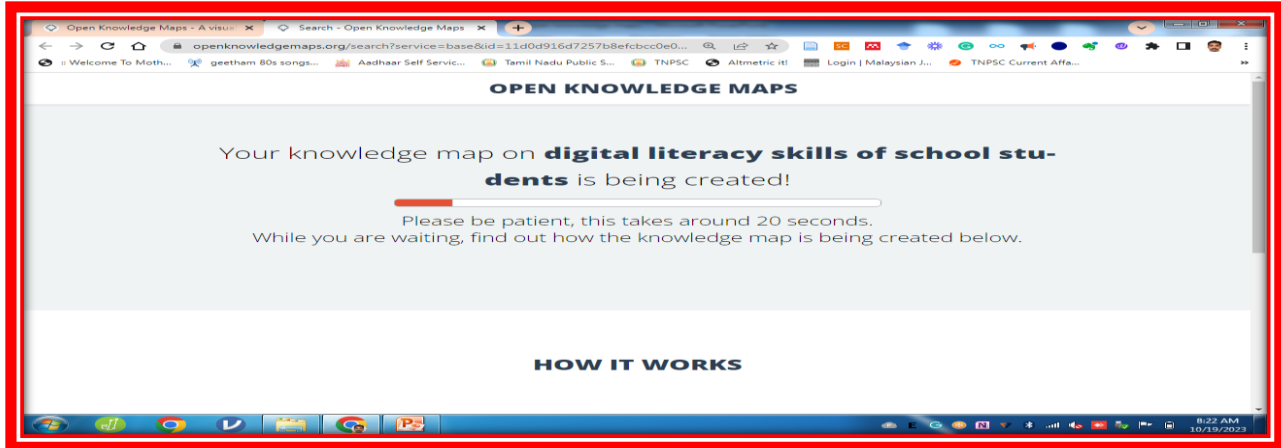
5: The knowledge map is thus created. You could see on the left side bubbles of different sizes and a good number of workable options on the right side. The size of the circles denotes the size of the category. Each circle is a categorized section of reviews. Each set of reviews represent certain common characteristics among them. The research papers bundled in each circle show an interlinked connection between the documents based on the text similarity concept.
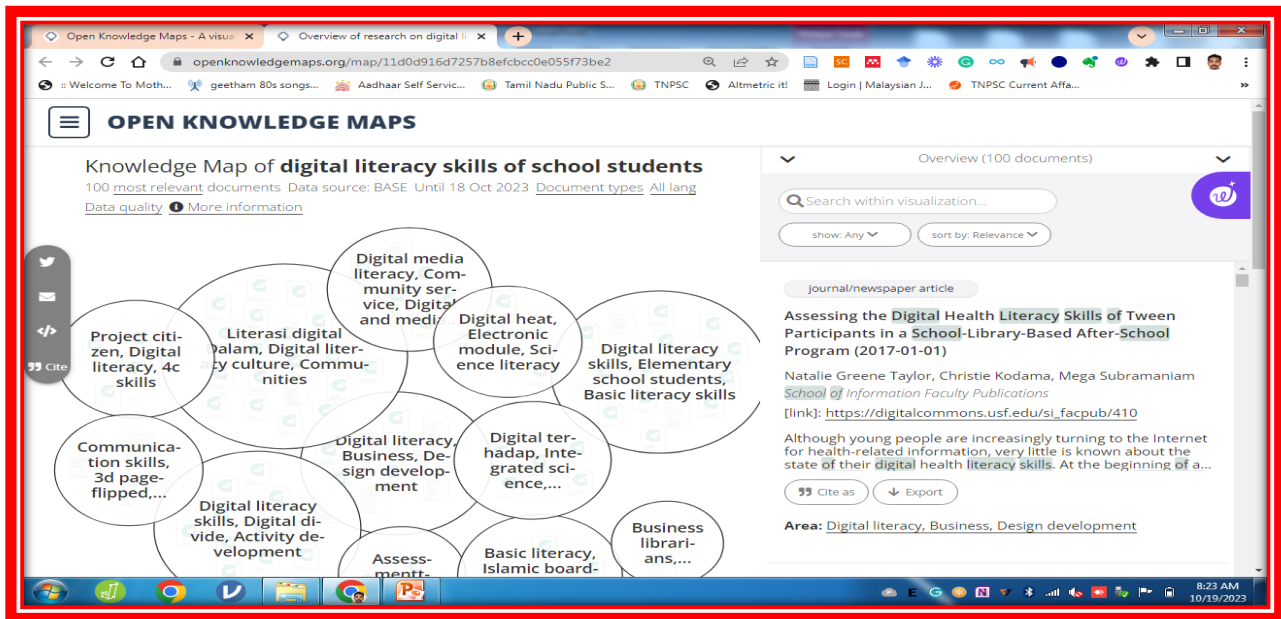
6: We could see on the right side many options. We can search for the papers using keywords. We can create knowledge map either based on all the 100 documents retrieved or based on only those open access research papers. I have chosen ' Open Access' from the dropdown menu.
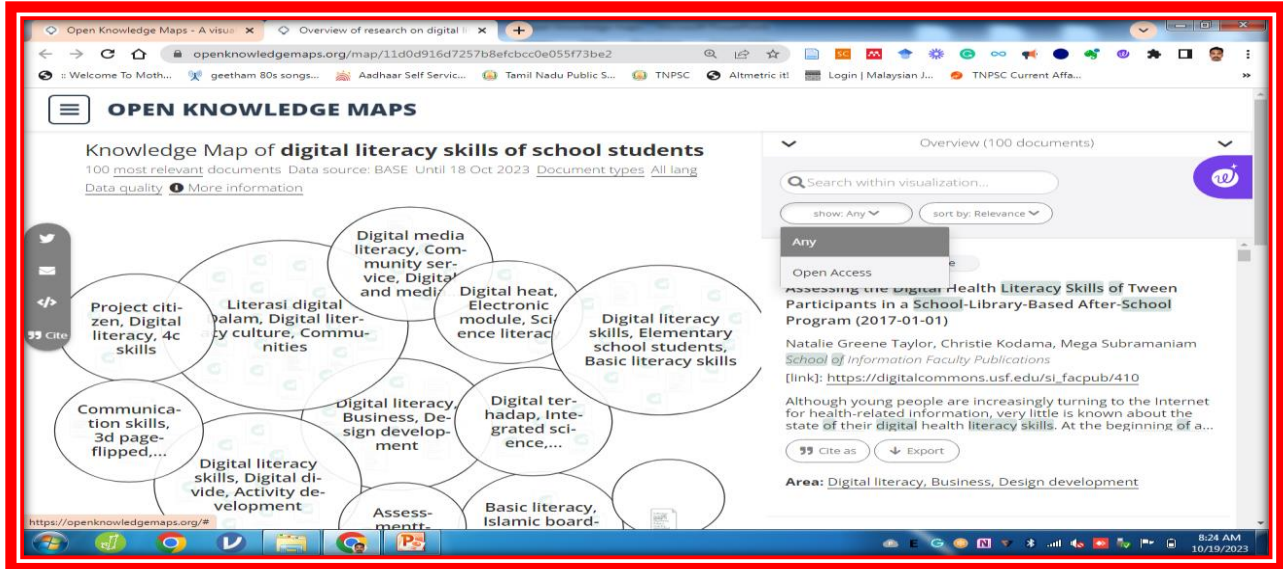
7: Now, you can see only 77 open access documents related to 'digital literacy skills of school students' out of 100 documents retrieved earlier. We have filtered the results.
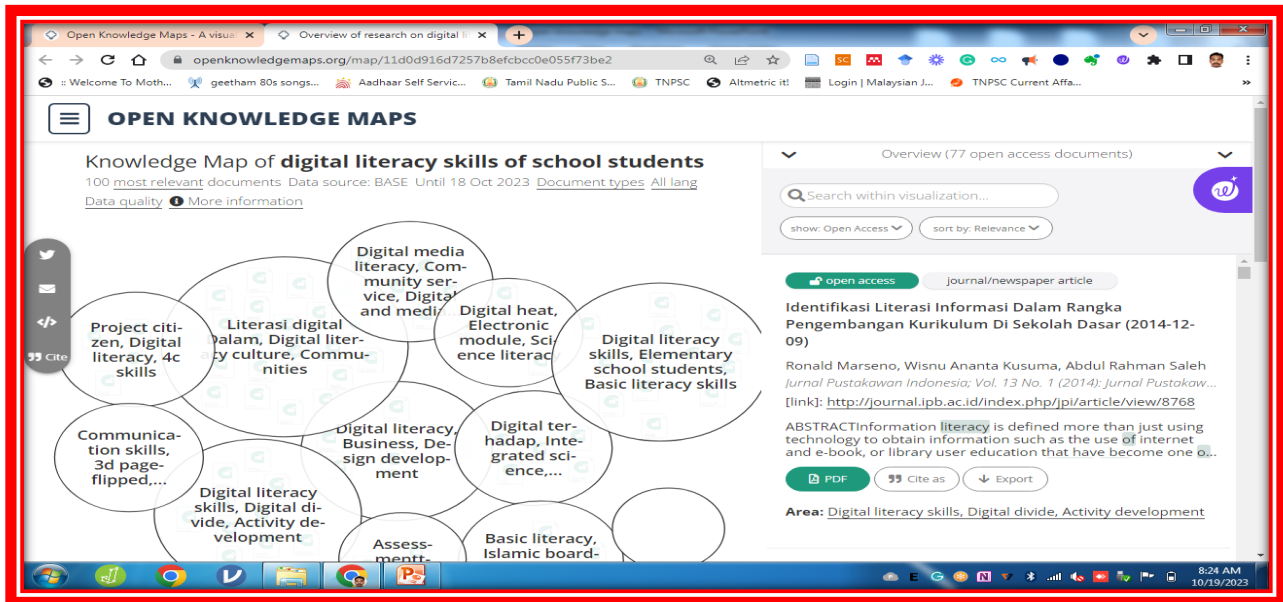
8: Below every research paper on the right side, we have three options. They are : PDF, Cite as and Export. Click 'PDF' to get the full text of the paper. Since all the 77 papers being included in the knowledgemap are open access papers, we can easily get PDF version of the selected paper.
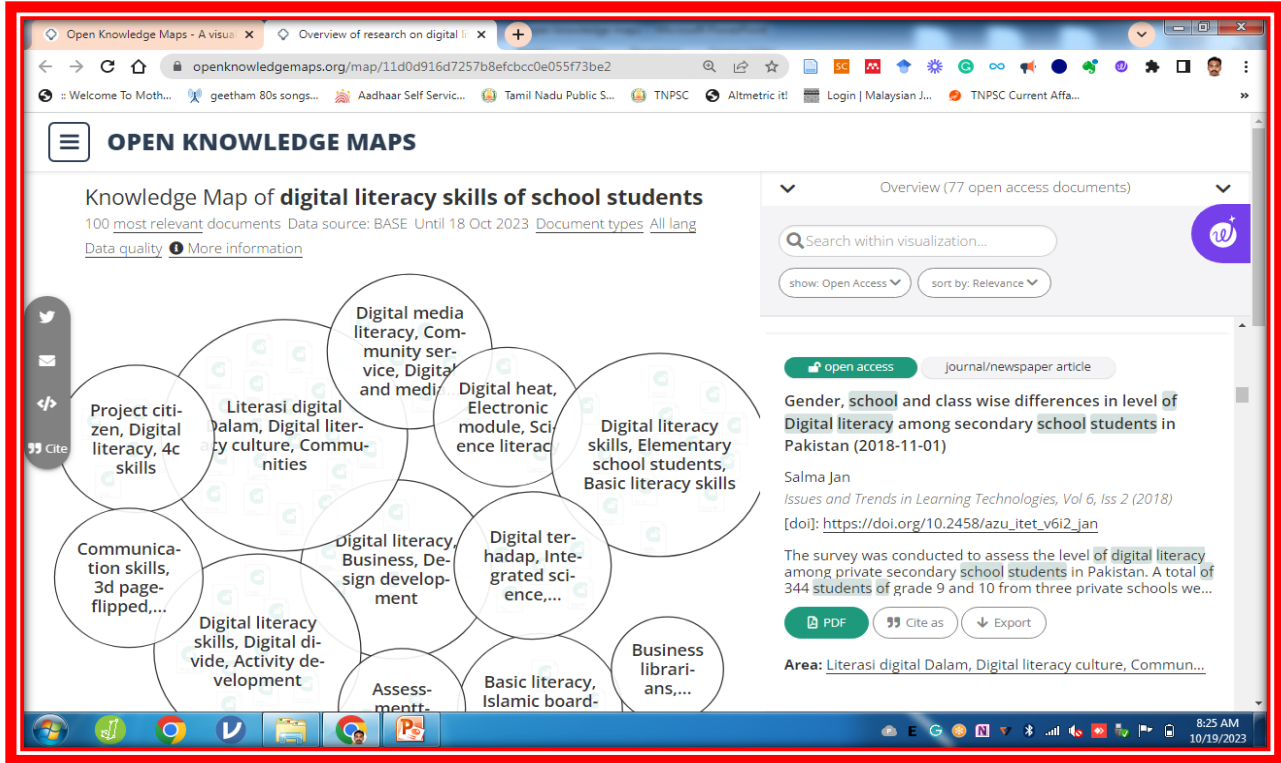
9: You can now see the full text of the research paper bring selected.
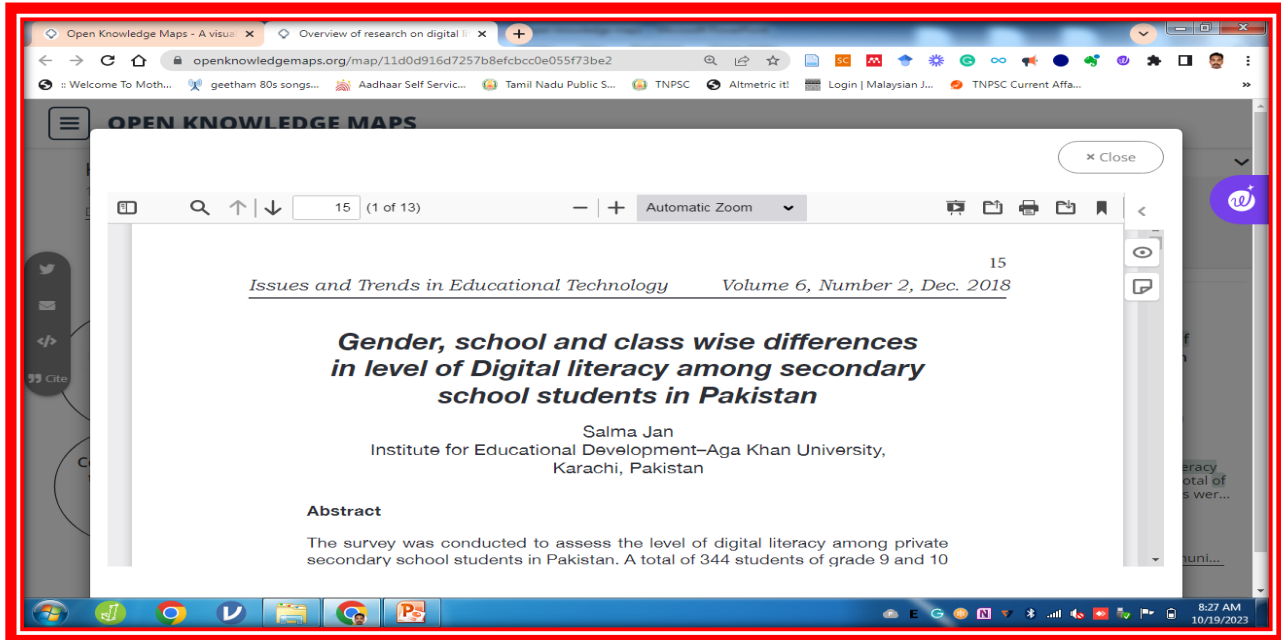
10: The second option is 'Cite as'. Click it. You will get the following screen. We can have the citation for the chosen PDF in four different styles namely APA, MLA, Chicago and ACM. By

default, the reference entry for the PDF file in APA 7th Edition is given. We can change it just by clicking the required style manual. Click 'Copy' to copy the reference entry into computer cache memory. Then, you can paste the entry in any doc/docx file using paste command.
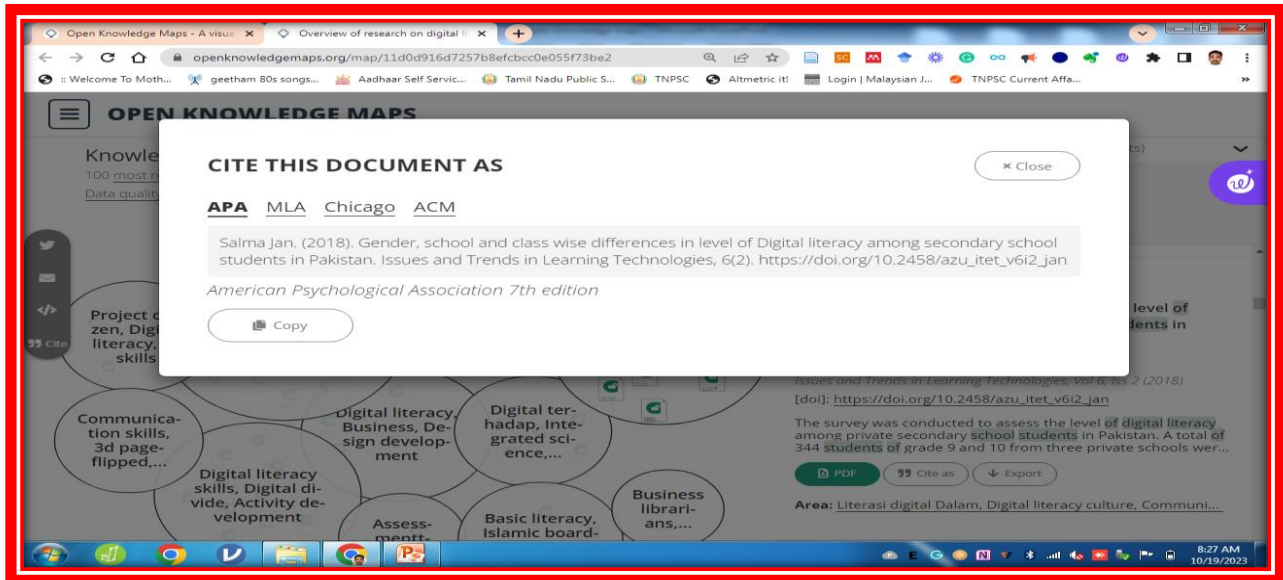
11. The third option available for the individual documents is 'Export'. Click ' Export'. The citation / bibliographical details of the chosen file can be saved or copied as BibTex File. Once it is downloaded as a BibTex file, then, you can use any reference management software to import the details.
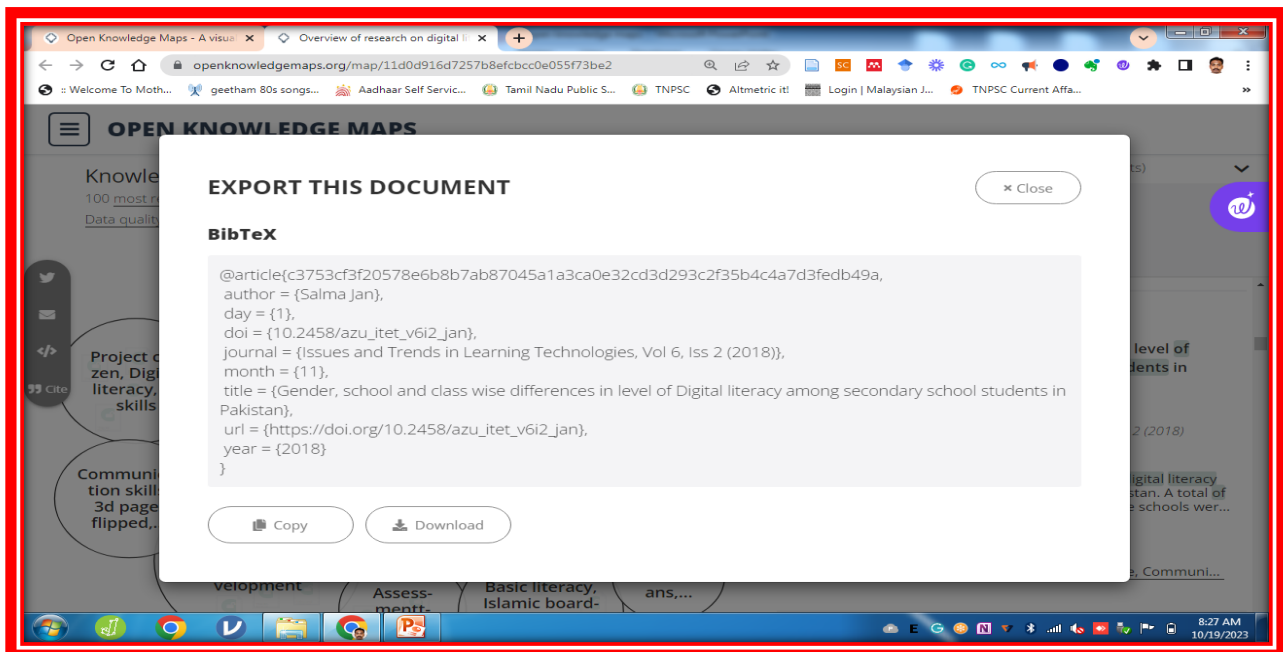
12: The 77 research papers retrieved as the results can be sorted and arranged by title, authors or year. If you want to get the latest papers on the chosen area of research, then you can sort the 77 records by year of publication.
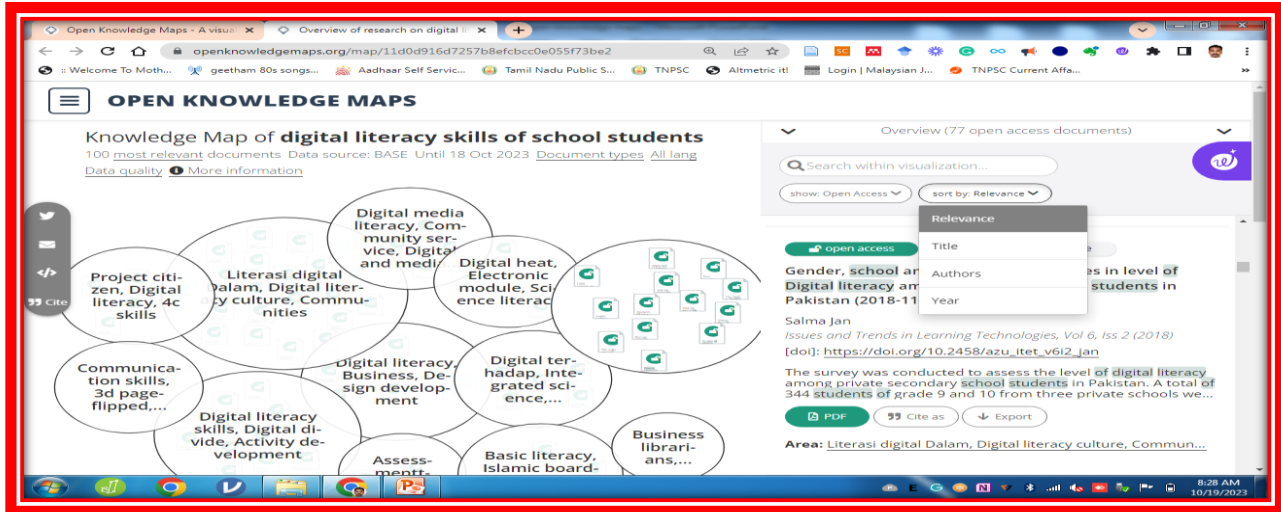
13: Now, click any circle of your choice. I have clicked the circle named as ' Digital literacy, Digital Divide, Activity development. Now the individual papers in the group become visible as green colour icons. The research papers included in the chosen circle are listed on the right side panel.
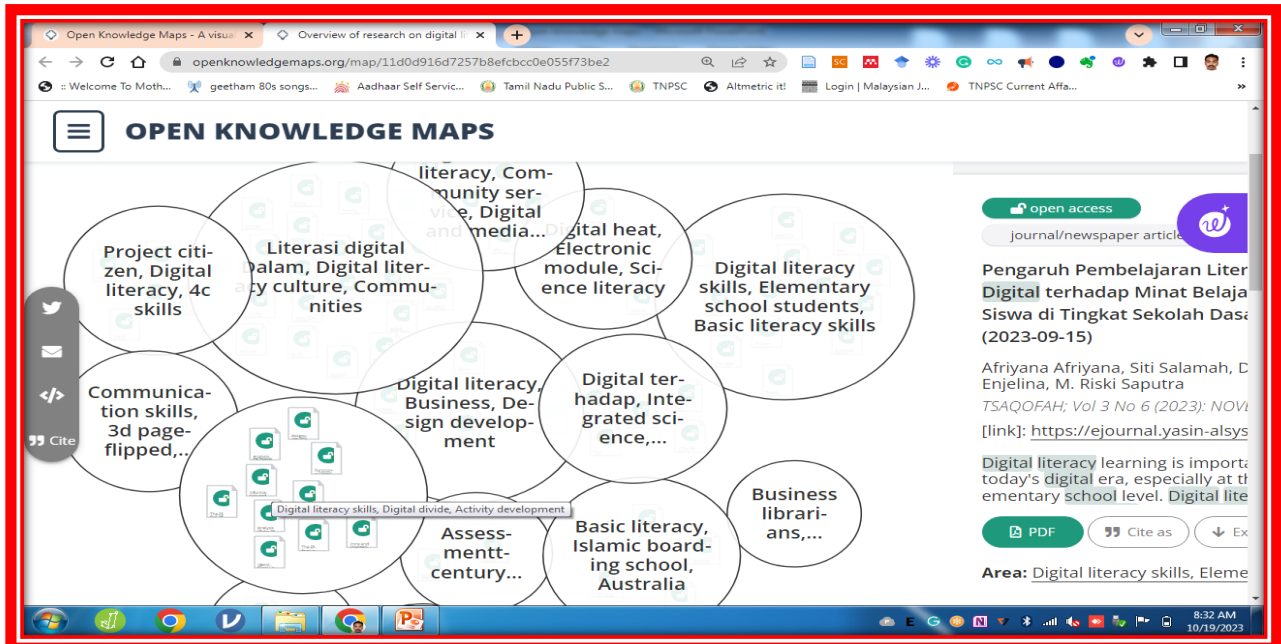
14: The next circle chosen by me, as indicted in the following figure, shows that this

categorically arranged research papers circle is about ' Digital literacy skills, Elementary school Students, basic literacy skills'.
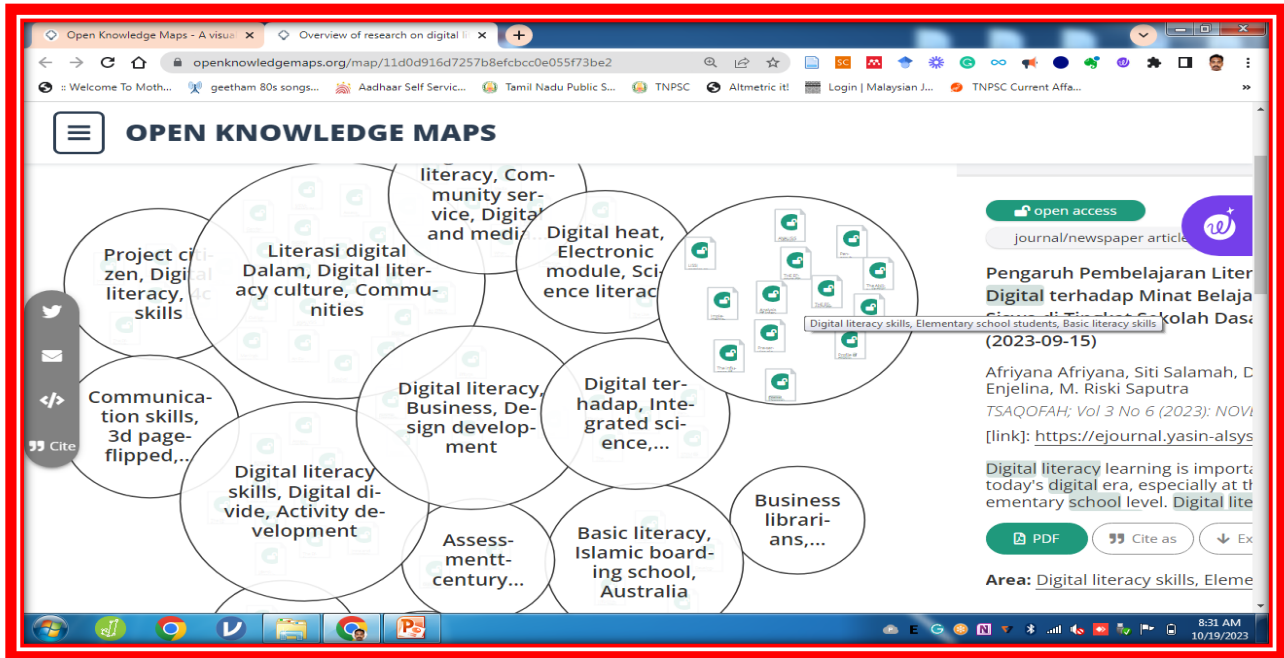

15: Click the circle once again to get a separate screen showing only those research papers which included in the chosen circle.
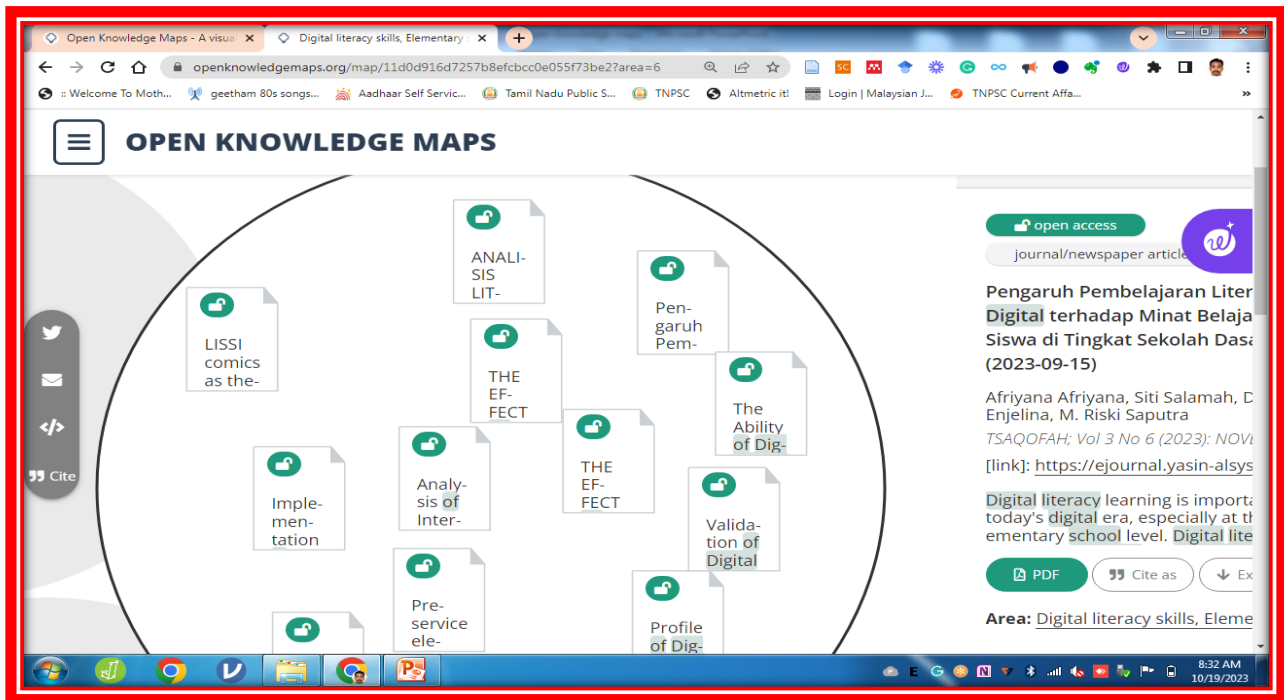
16: Hover the mouse over any of the individual file included in the chosen circle, will give you're the basic details about the research paper such as title of the paper, name of the author(s), name of the journal, volume number, issue number, page numbers and ISSN number.
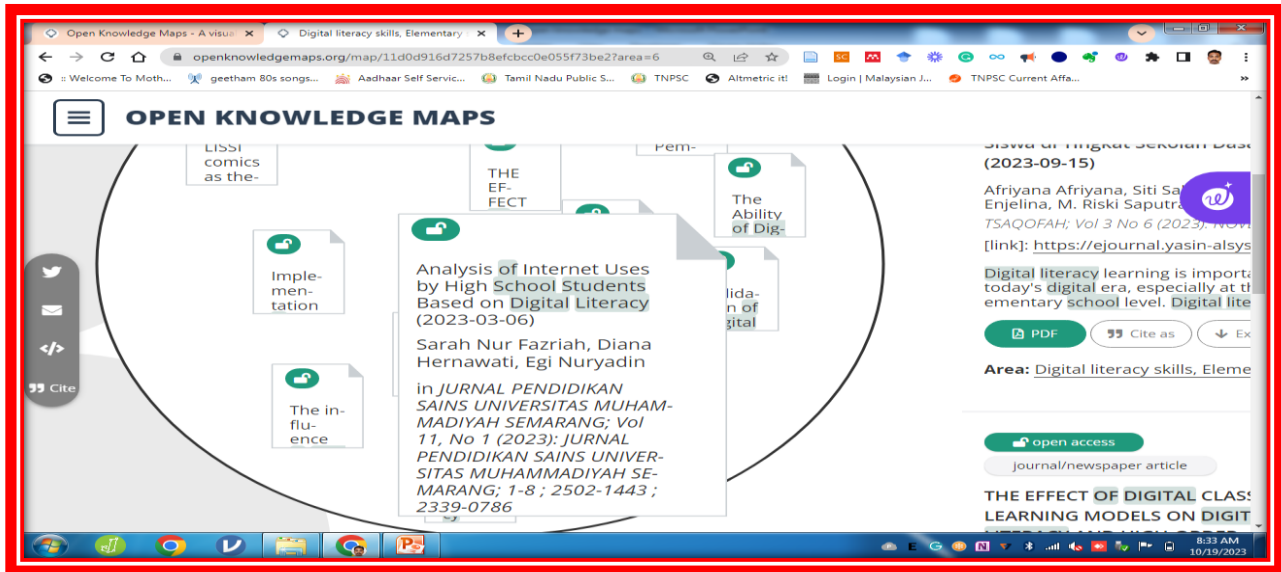

17: Now, click any one individual document. The details of the paper appear on the right side pane. The title of the research paper, name of the authors, source, volume and issue number, year of publication, page numbers, ISSN number , link to access the full text and abstract of the paper are available on the right pane. This helps you to decide whether the paper is relevant and needs any further exploration. If relevant, click the link to get the full text of the research paper.
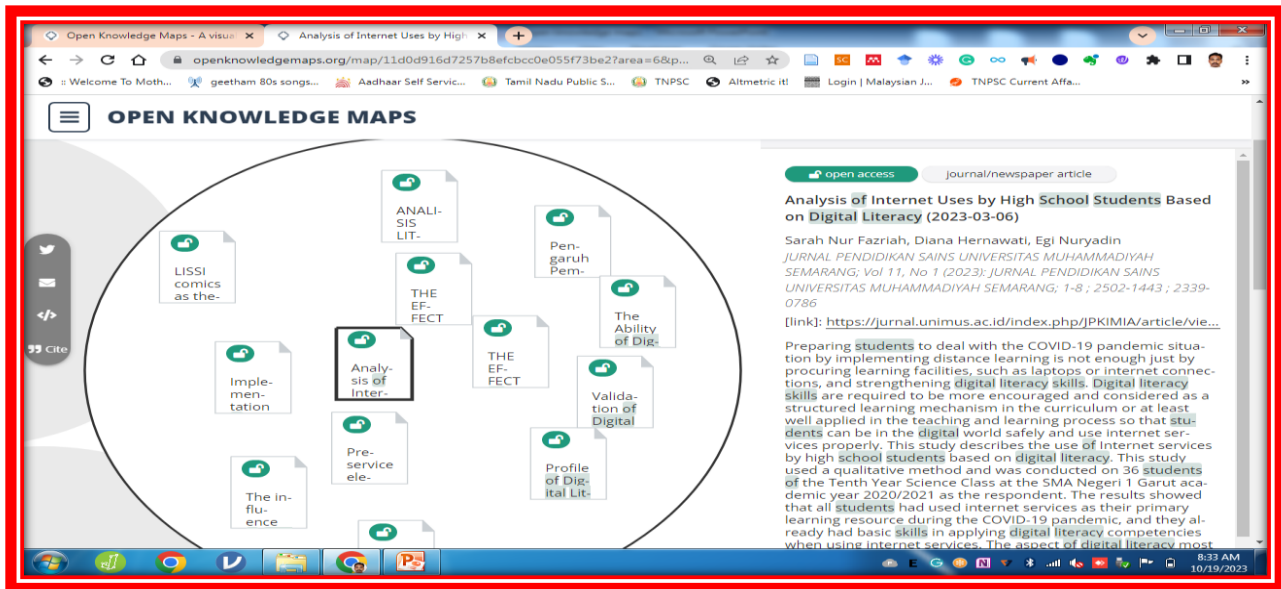
18: The top paragraph informs us that the knowledge map is created with 100 most relevant documents and the data source is BASE. The OKM was created on 19/10/2023. The map includes all kinds of documents and all languages. If you click the button, a small pop up appears. There are options to share the OKM either via Twitter or Mail. There is another option to cite. I have clicked 'Cite'.
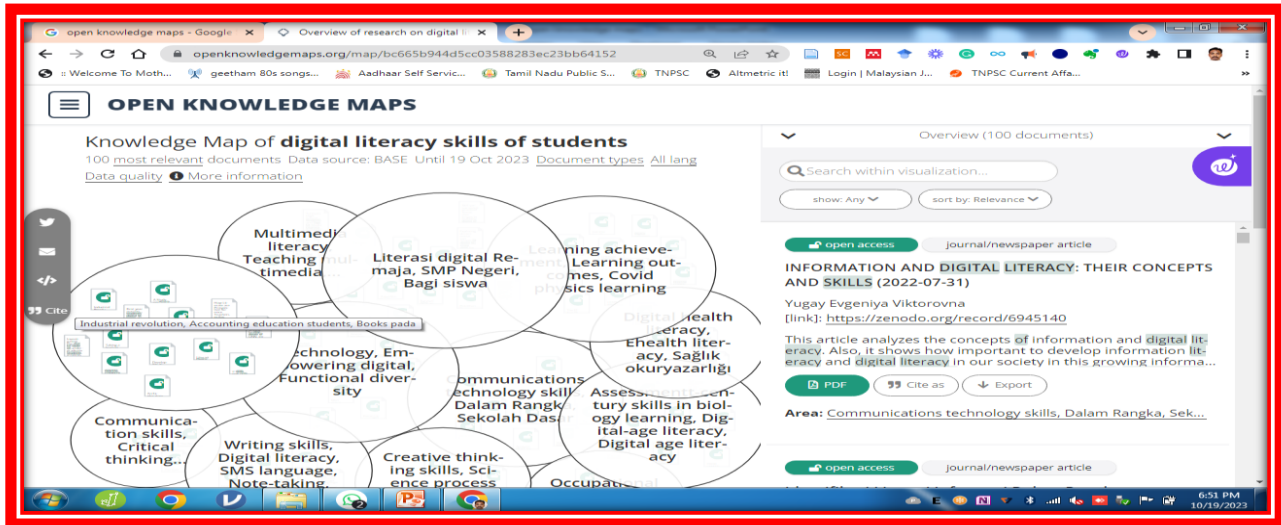

19: The following screen shows how to cite this particular OKM. Click Copy to copy the reference and you may paste it in the desired bibliography of your research paper.
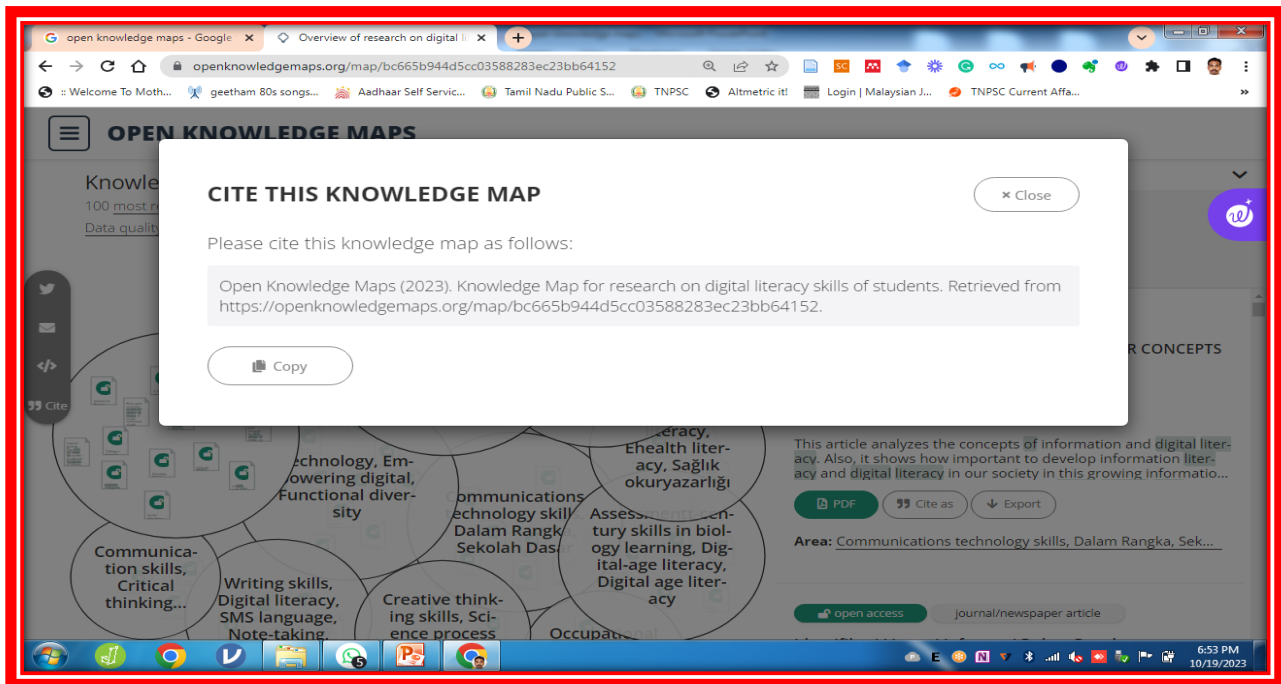
20: If you are interested to get the code to embed this particular OKM in your own website or in a dashboard, then click the symbol '</>'. You can se the code in the next screent that can be pasted in your bloog or website widgets or templates for a display.
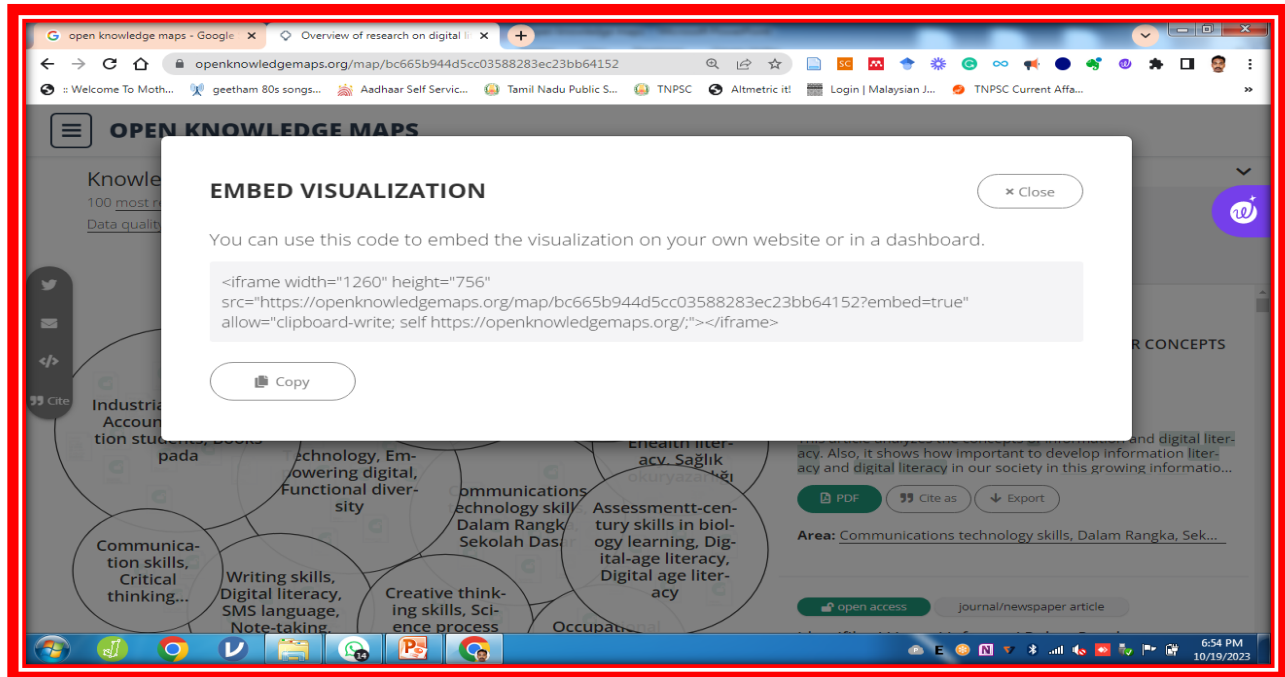
Concluding Remarks

The substantial potential of AI in scientific writing is still not fully realized, urging scholars to give immediate attention to exploring its untapped avenues for research and discovery. However, to utilize its benefits responsibly, we must probe deeper into understanding the various utilities of AI applications while maintaining a delicate balance between ethical use, research excellence, and integrity, and avoiding misconduct (BaHammam et al., 2023). Used responsibly, AI can benefit people and society as a whole by unlocking the full potential of education and research. However, it is important to integrate AI with ethical decision-making to ensure that humane care is maintained and all issues related to personal data and injustice are resolved. Used responsibly, AI can unlock the full potential of education and research by providing students with valuable and personalized learning experiences and researchers with the quality of tools and consensus to foster knowledge and innovation (Kenchakkanavar, 2023). Despite the potential drawbacks associated with AI-based research utility platforms, it is important to acknowledge the numerous positive impacts that AI can bring to research and

technical writing. The utilization of AI holds great promise in terms of increased efficiency, improved accuracy, enhanced objectivity, updated context, and time-saving capabilities. As we navigate the information age, AI has become an indispensable tool in academia. However, it is crucial to ensure that the technology is utilized ethically, as any misuse or unethical practices can undermine the integrity of scientific research and communication. By leveraging AI responsibly and with a strong ethical framework, we can harness its immense potential and pave the way for a brighter future in research and knowledge dissemination (Bankar & Lihitkar, 2023).

The purpose of this paper is to demonstrate how to make use of a freely available AI tool called ' Open Knowledge Map' to create clusters of research papers pooled together based on text similarity algorithm with the opens source software' Head Start'. The process is simple and the result is quite impressive. The OKM categorizes the research papers (100 most relevant papers) into meaningful groups. It saves the time of the researchers. If we search for only open access papers, then full texts can be accessed. I feel that the coverage of the OKM can be extended to other databases too. It is limited to PubMed and BASE now. Other open access aggregators, online resource vendors and search engines may also be added. Some sort of freedom may be given to the OKM users to choose number of research papers that need to be considered for forming categorized cluster of reviews. The use of OKM is to go alongside the critical thinking of the researchers. Such AI tools need to be used with due ethical considerations and copyright implications.

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Promising Approaches from Cellulose to Nanocellulose in Reinforced Polymer Industry- A Comprehensive Study

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Abstract

A move towards sustainability and greener approach and the widespread strengthening of SDG goals towards sustainability has urged researches to explore the potential of sustainable biomaterials for use as raw material in every industry. Fiber reinforced composites are one of the best frontrunners in the materials era from spacecrafts to electronics and medicine. Research shows that excellent properties of nanocellulose has proved it as frontrunner as reinforcement in composite industry. This paper is a review on the nanocellulose and its applications in polymer composites industry.

Keywords: Nanocellulose, fiber reinforced polymer

Introduction

Nanocellulose is the herbal fiber in nano scale which may be extracted from cellulose, the primary structural factor of plant molecular walls. Nanocellulose shows promise as a new type of reinforcing agent in the field of composite industry. Nanocellulose have a characteristic shape and are ~3 nm in width and several micrometers in length. They have been demonstrated to have excellent mechanical and thermomechanical properties, with high strength (2–6 GPa), high elastic moduli (130–150 GPa) and low thermal expansion coefficients (4–6) ppm K^{-1} making them a suitable material in polymer industry as reinforcement (1). Cellulose, one of the most abundant raw materials has excellent properties. The potential of cellulose is exploited in various industries and is found to be one of the most sustainable biomaterial of the future. Cellulose is present mainly from micro to macrolevel bioforms especially from bacterial, algae to higher

order woody plants. The plant fibre is composed of three secondary walls, a lumen in the centre, and a main cell wall on the exterior. Whereas the cellulose fibres in the secondary cell wall are oriented helically, the cellulose fibres in the primary cell wall are arranged randomly. In the secondary cell wall the fibers are oriented helically, the cellulose fibres in the primary cell wall are ordered haphazardly. Chemically, cellulose is a linear polysaccharide produced from ringed glucose monomers linked together through β-(1,4) glycosidic bonding. Morphology studies shows the presence of alternating regions of crystalline and amorphous zones, which, together, form the characteristic macroscopic fibrous structure of cellulose. The strength of cellulose is contributed by the highly ordered crystalline region which makes them more chemical resistance and decrease solubility in water (2, 3). Nanocellulose is synthesized from different sources under different reaction conditions. Categorically nanocellulose are classified into three types: cellulose nanocrystals (CNCs), nano-fibrillated cellulose (CNF), and bacterial nanocellulose (BNC) based on the function of their sources, the degree of crystallinity, and The extraction and manufacturing method, if a bottom-up or top-down method is used. CNCs are made up of cylindrical, elongated, inflexible, rod-like nanoparticles that are typically produced by hydrolysis. They have dimensions of 4–70 nm in width and 100–6000 nm in length, with a crystallinity index of about 54-68%. In order to extract cellulose nanocrystals, cellulose sources are often pre-treated to partially remove hemicellulose and lignin content (4). This is followed by acid hydrolysis or enzymatic treatment of the cellulose fibres. The crystalline content of the cellulose fibres is increased and the amorphous sections are removed with the aid of the acid treatment. Compared to enzymatic hydrolysis, it often requires harsher reaction conditions and less time. The surface functions of the nanocellulose are determined by the mineral acids utilised in acid hydrolysis. Because the cellulose chains are surrounded by negatively charged sulphate groups, the nanocellulose made from sulphuric acid has a high colloidal stability. These surface groups' repellent properties stop the cellulose chains from further aggregating. With a braided network structure and dimensions of 20–100 nm in width and >10,000 nm in length, nano-fibrillated cellulose (CNF), which is typically generated mechanically, is made up of longer, more flexible fibres with a low crystallinity index (88%, bacterial nanocellulose (BNC), microbial nanocellulose, is the most promising and economical biomaterial, particularly for the biomedical industry [5]. The BNC is made up of recognizing 3D networks made up of ultrafine nanofibers

with diameters ranging from 20 to 100 nm and lengths measured in micrometres Flexible fibres with alternating crystalline and amorphous domains with a high aspect ratio, diameter ranging from 5 to 30 nm, and length of several micrometres are known as nanofibrillated cellulose [NFC] or cellulose nanofibrils [6, 7]. Numerous sources, including microbes, plants, and animals, can provide NFC. The resulting fibrillated cellulose's size, crystallinity, and shape are primarily determined by the mechanical treatments and unprocessed natural sources [8]. Nanocellulose is a promising material that is essential to a variety of industries, including electronics and medical. Mali and Sherje reported that the biodegradability and biocompatibility of nanocellulose makes it non-toxic for humans and useful for the reconstruction of body tissues or for drug delivery and medicine. Industries typically employ nanocellulose as a strengthening agent. Omran et al. showed that these nanomaterials can modify the surfaces with various functional groups that enhance their compatibility with polymers to obtain various multifunctional composite materials. Nanocellulose has the potential to enhance the properties of poly(lactic acid) and poly-3-hydroxybutyrate/poly-3-hydroxyvalerate. They have a high Young's modulus, and can be related to the Kevlar material, and used for the production of highly robust materials [8]. In order to enhance the qualities of natural or synthetic textile fibres, nanocellulose can also be applied as a surface treatment or incorporated as an addition into a polymer matrix [9]. In both environmental remediation and water treatment, nanocellulose is essential serving as a The nanocellulose surface has a large number of hydroxyl groups, which enable it to interact with organic molecules and heavy metals found in waste fluids and function as a filtering membrane. Nanocellulose can be utilised as a UV shield and possesses fire retardant qualities [9]. Moreover, they have good antimicrobial property and it can be used as in hospitals wallpapers and as food packaging materials and water filters [9]. In the field of cultural heritage, nanocellulose can be used in combination with some additives , such as silver nanoparticles ZnO and (AgNPs), thus providing an antibacterial and antifungal eect against commonly available fungi in archives or museums. Nanocellulose has use in the electrical industry since it can increase the conductivity and suppleness of composite materials [10]. For instance, polyaniline nanocellulose composite material finds extensive application in the production of electrical devices, paper-based sensors, flexible electrodes, and conductive adhesives [10].

Characterization of Cellulose Nanomaterials

Properties evaluation of cellulose nanomaterials are investigated and characterized using a variety of techniques. These most common properties investigated include surface morphology, size, dimensions (length, diameter, and aspect ratio), shape, thermal stability, surface charge, crystallinity, mechanical and optical qualities. For the morphological and topographic analyses of nanocellulose, Kumar et al. [11] demonstrate the use of field emission scanning electron microscopy (FE-SEM), atomic force microscopy (AFM), and transmission electron microscopy (TEM) techniques; Fourier transform infrared spectroscopy (FTIR) was used for the chemical and physical analyses. Elemental analysis was completed using energy dispersive X-ray diffraction (EDX) and X-ray diffraction (XRD). Thermogravimetric analysis (TGA), derivative thermogravimetry (DTG), and differential thermal analysis (DTA) are used to assess the thermal stability and thermal response to a change in temperature. These techniques allow us to assess the thermal stability of the consolidants. Specifically, XRD was used to determine the crystallographic structure of CNC and, consequently, the degree of crystallinity of nanocellulose [12, 14]. Singh et al. suggest using the DLS technique, also known as photon correlation spectroscopy, to analyse the particle size of isolated microcrystalline cellulose. Actually, the issue with the DLS technique is that, although this light scattering-based model performs well in characterising spherical particles with a single, constant rate of diffusion, it is not always able to accurately measure the size of particles in terms of their length or cross-section for nanocellulose structures, which have high aspect ratios and varying translational diffusion constants that are parallel to and perpendicular to one another. As a result, this method offers a hydrodynamic "apparent particle size" that is utilised to assess the aggregation and dispersion of NC suspensions. However, in order to obtain a more precise analysis, it is required to integrate the DLS results with those from other methods, like microscopy analyses . Huang et al. were able to differentiate between the morphological variations of the four polymorphic nanocelluloses produced with the four distinct treatments, in particular, because of the SEM and TEM investigations. Mishra et al. demonstrate the application of additional methods for the analysis of the particle dimension distribution in the study of the nanocellulose morphology, including dynamic light scattering (DLS), small-angle neutron scattering (SANS), small-angle X-ray scattering (SAXS), and wide-angle X-ray scattering (WAXS) [13]. Additionally, they talked

about assessing NC's structure and crystallinity using Raman analysis. In order to examine the impact of chemical alterations on the surface polarity resulting from the nanocellulose, Moran et al. present the contact angle measurement of starch films functionalized with nanocellulose. Gond et al. measured the optical characteristics of nanocellulose using UV/visible spectroscopy. The antimicrobial hobby of nanoparticles or different nanomaterials, including nanocellulose, is commonly completed via way of means of optical and electronical microscopy [13].

Nanocellulose in Reinforced Polymer

Literature shows that nanocellulose is a promising reinforcement with polymers for manufacturing composites. The distribution and dimension of nanoparticles entails critical factors during reinforcement. If the scale is simply too large, the nanometer impact is weakened, which incorporates a lower withinside the quantity of segment interfaces, a weakening of the bond energy among The reinforcing section and the matrix and a deterioration of the strain conduction effect [15]. Because of the high surface activity and hydrophilicity of nanocellulose, self-aggregation is inevitable without a certain amount of processing, it easily self-aggregates, which makes dispersion more difficult to disperse. If the particle length distribution is simply too wide, the fast plate impact may be prominent, and the enhancement impact may be reduced. In addition to the distribution mode, the association mode of nanocellulose additionally has a widespread have an effect on the composites. Nanocellulose is a kind of nanomaterial with a excessive element ratio in maximum cases, composed of linear molecules, and its axial and radial mechanical residences are extensively distinct. Literature shows that many work has been done by using nanocellulose as reinforcement. Boufi etal. insulated nanofibrillated cellulose(NFC) and cellulose nanocrystals(CNCs) from both the alfa factory and rachis of the date win tree. For the medication of CNC, the pre-treated filaments were acid hydrolyzed with H_2SO_4 and for the medication of NFC, the pre-treated filaments were TEMPO- oxidized and latterly homogenized at high pressure (16). The morphologyof CNC and NFC turned into depending on the form of the source. The CNC and NFC of the date palm tree reported the loftiest aspect rate compared to the alfa factory. The poly(styrene-co- butylacrylate) mixes were fabricated using the casting system. The DMA studies reported asignificant buttressing effect of the nanofiller on the storehouse modulus of the mixes. Zielińska etal. enzymatically hydrolyzed micrometric

cellulose (Cel_A) with 20 μm particle size and micrometric cellulose (Cel_B) with 18 ± 3 μm flyspeck size usingcellulases. Cellulases from the bitsy fungus trichoderma reesei ATCC 26,921 and Aspergillussp. were used for the hydrolysis. The attained cellulose become in addition used to reinforce the PP matrix. Rao etal. fabricated polymer mixes with a high quantum of(60 to 90) CNC in epox ide oligomer. The mixer become ultrasonicated and bureaucracy a gel. It was also 3D published or cast andlater thermally cured(performing in crosslinking between the OH groups of cellulose and epoxide groups of epoxy resin monomers). Complex structures with cellulose nanocrystals with high strength, stiffness, durability, and hardness can be developed by this approach. Somseemee and co-workers studied the impact of UV radiation at the cellulose nanocrystal's reinforcement on epoxidized herbal rubber (ENR). The cellulose nanocrystals were extracted from Napier lawn stems. The insulated cellulose nanocrystals and maleic anhydride-modifiedcellulose nanocrystals were used as the underpinning for epoxidized natural rubber. The ENR and ENR mixes were cured using ultraviolet irradiation. The maleic anhydride- grafted cellulose nanocrystals(5 wt) modified epoxidized natural rubber showed the stylish tensile strength, modules, and hardness due to better underpinning caused by the better interaction among changed cellulose nanocrystals and epoxidized herbal rubber advised by UV irradiation (17).

Ghasemi andco-workers reused PLA with nanocellulose along with the compatibilizer maleated PLA(PLA- g- Mama) through melt mixing and extrusion and the test specimens were prepared by injection molding. The composition of maleated PLA was 5 wt, while that of the cellulose nanofibers was 3 and 5 wt. Among the mixes, PLA/ CNF5/ PLA- g- MA5exhibited maximum HDT, maximum enhancement in impact strength, maximum tensile strength (138 enhancement), and a 40 enhancement in Young's modulus when compared to neat PLA.

de Souza, etal. in their study, punctuate the insulation of nanocellulose from both cotton waste and artificial paper wastes using acid hydrolysis. The cotton waste(10 wt), artificial paper wastes(3 wt), and isolated nanocellulose from cotton waste(10 wt) and insulated nanocellulose from industrialpaper wastes(3 wt) were incorporated in the PLA matrix as underpinning. The study revealed an enhancement in tensile strength and extension at break with the objectification of nanocellulose. The increase in the parcels was due to the better distribution of the filler and due to the chemical cling of the OH group of nanocellulose and the CO group of the PLA matrix.

Lammetal. explored the operation of chitin as a binary- cling padding in PLA/ nanocellulose mixes. The study reported that on one hand, chitosan formed hydro word bonds with cellulose, and on the other hand, it formed amide bonds with poly(lactic acid) therefore perfecting the interfacial commerce between the PLA and nanocellulose, and improving significantly the mechanical parcels with a small quantum of chitin(2.5 wt).

Further, nanocellulose modified polyvinylalcohol(PVA) mixes were fabricated using the solvent casting system. Water is used as the detergent for making mixes. The thermal stability of PVA/nanocellulose mixes reported bettered declination temperature. The increased thermal stability was due to the hydrogen cling between the cellulose and PVA. The tensile strength and extension at break of the mixes were also reported. It was observed that the mixes with 2 wt percentage nanocellulose showed bettered tensile strength followed by a drop at a advanced percent age of the nanocellulose. This was due to the aggregation of nanocellulose at higher concentrations. On the other hand, the extension at break of PVA gradationally reduced with the incorporation of nanocellulose. The gradational reduction in extension at break was due to the restricted movement of polymer chains in the presence of the nanofillers.

In another study, Gong etal. reported enhancement in tensile strength, tensile modulus, storage modulus, and bettered creep resistance of polyvinyl acetate with the objectification of 10 wt percentage nanocellulose. Ethylene vinyl alcohol is known for its gas hedge parcels, but it has poor humidity resistance that limits its operation in food packaging.

Tang and Liu prepared PVA mixes with a non-transparent electron- spun cellulose nanofibrous mat. The mechanical parcels and translucency were estimated. The PVA com posites with 40 wt percentage cellulose nanofibrous mat showed the stylish tensile strength and modulus, and improved translucency. The high number of OH groups in nanocellulose mats and PVA was responsible for the bettered mechanical parcels and translucency.

Nuruddin etal. developed ethylenevinyl alcohol/ cellulose nanocrystal mixes modified with food- grade compatibilizer(monolaurin) by melt compounding process for implicit food packaging operations. It is observed that the mixes modified with monolaurin showed excellent comity with improved thermo- mechanical and humidity hedge parcels (18).

All these studies proved that nanocellulose reinforced polymer composites have improved properties.

Conclusion

Nanocellulose makes an ideal nanofiller due to its extremely low particle size, high specific surface area, high modulus, high strength and ease of modification. Nanocellulose reinforced polymers have the ability of improving the strength of the material while not significantly reducing or even enhancing the toughness of the material, which provides more possibilities for the application of the material and being a best competitor to its couterpart. If the existing preparation processes with high energy consumption can be further improved, nanocellulose can also be a widely available cheap natural biomass, biodegradable, nontoxic, biocompatible and environmentally friendly raw material. Hence nanocellulose these factors make nanocellulose an important choice in the fields of biodegradable plastics, bioscaffolds, catalysts and drug carriers. There is an inherent compatibility problem between hydrophilic nanocellulose and most hydrophobic polymer matrices, which greatly affects the dispersion of nanocellulose with the polymer matrix. If these properties are compromised with better modiication, nanocellulose can lead to a more diverse composite design and improve performance. This is both an opportunity and a challenge that researchers also face as challenge in developing modified materials with higher value-added materials. Thus, with further research, nanocellulose reinforced polymer composites are expected to become the most valuable composite material in the coming era in industries.

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Traveling Waves of Fisher-KPP Equation by Direct Similarity Method

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Key Words: Fisher Equation–Invariant Solutions–Direct Similarity Method

Abstract: Fisher-KPP equation is subjected to direct similarity method to determine its traveling waves as invariant solutions. All the computations are carried out using the software WOLFRAM MATHEMATICA Version Number:12.2.0.0.

1. Introduction

Let $u(x,t)$ be the frequency of the mutant genes in a linear habitat which is distributed with uniform density. When the inevitable mutation takes place in a gene, known hereafter as the advantageous gene, the population of these mutant genes increase at the expense of the allelomorphs. If m is the intensity of the selection in favor of the mutant genes and k the coefficient of diffusion of the mutant genes away from the location of their parent allelomorphs. Fisher (1937) and Kolmogorov, Petrovsky and Piscounov (1937) modeled this diffusion process into a (1+1)-dimensional nonlinear partial differential equation, known as, Fisher-KPP equation

$$u_t = k \, u_{xx} + m \, u \, (1 - u), \tag{1}$$

By a suitable scaling the constants k, m be set equal to unity. Equation (1) arises not only in ecology but also in biology and heat and mass transfer.

Ablowitz and Zeppetella (1979) looked for traveling wave solutions of (1), with $k = m = 1$, in the form $u(x,t) = u(z), z = x - ct$. Apparently $u(z)$ is governed by the nonlinear differential equation

$$\frac{d^2u}{dz^2} + c\frac{du}{dz} + u - u^2 = 0, \tag{2}$$

with the solution

$$u(z) = \left(1 - Ae^{\frac{z}{\sqrt{6}}}\right)^{-2}, z = x - \frac{5}{\sqrt{6}}t, \tag{3}$$

Here A is a free constant.

For

$$u_t = u_{xx} + u - u^k, \tag{4}$$

Kaliappan (1984) found

$$\left(1 - Ae^{\frac{k-1}{\sqrt{2(k+1)}}z}\right)^{-2/(k-1)}, \tag{5}$$

as its solution by applying the regular perturbation method (Zwillinger (1997)). Note that when $k = 2$, the solution (5) reduces to (3) as expected.

In this paper we apply the direct similarity method to (2) to derive its traveling wave solutions. It is customary that the derivation of invariant solutions is carried out using the Lie's Classical Method (Ovsiannikov (1982), Bluman and Kumei (1989) and Olver (1995)). In order to explore the invariance analysis the non-classical method of Bluman and Cole (1969) and the direct similarity method of Clarkson and Kruskal (1989) are recommended.

It is to be remarked that we do not make use of the third Remark, which facilitates the determination of the similarity variable, of the direct method. Further the computations are made simple by the use of WOLFRAM MATHEMATICA Version Number:12.2.0.0.

II. Solutions by Direct Similarity Method

Consider the Fisher-KPP equation

$$w_t \; = \; w_{xx} + a \; w \; (1 - w), \tag{6}$$

where a is a constant. We seek solutions of (6) in the form of

$$w(x,t) = A(x,t) + B(x,t)F(\xi), \quad \xi = \xi(x,t), \tag{7}$$

Substitute (7) in (6) we get an ordinary differential equation for $F(\xi)$:

$$\Gamma_1 + \Gamma_2 F + \Gamma_3 F' + \Gamma_4 F^2 + F'' = 0. \tag{8}$$

where the four functions $\Gamma_n(\xi), \; n = 1, 2, 3, 4$ are introduced according to

$$aA - aA^2 - A_t + A_{xx} \;\; = \;\; B\xi_x^2\Gamma_1, \tag{9}$$

$$aB - 2aAB - B_t + B_{xx} \;\; = \;\; B\xi_x^2\Gamma_2, \tag{10}$$

$$B\xi_t + 2B_x\xi_x + B\xi_{xx} \;\; = \;\; B\xi_x^2\Gamma_3, \tag{11}$$

$$-aB^2 \;\; = \;\; B\xi_x^2\Gamma_4. \tag{12}$$

We shall now solve (9) – (12) for $A(x,t), B(x,t), \xi(x,t)$ and $\Gamma_n(\xi), n = 1, 2, 3, 4$ with the help of the following two remarks:

Remark 1: If $A(x,t)$ has the form $A(x,t) = \hat{A}(x,t) + B(x,t)\Omega(\xi)$ then we may choose $\Omega \equiv 0$

Remark 2: If $B(x,t)$ is found to have the form $B(x,t) = \hat{B}(x,t)\Omega(\xi)$ then we may put $\Omega \equiv 1$.

With $\Gamma_4 = -a\Omega_4$ equation(12) reads as $B = \xi_x^2\Omega_4$; in view of Remark 2 we take $\Omega_4 = 1$ ($\Gamma_4 = -a$) and finally find B as

$$B = \xi_x^2. \tag{13}$$

We insert (13) into (11) and assume $\Gamma_3 = 0$ to obtain the following second order linear heat conduction equation governing the similarity variable ξ:

$$\xi_t - 5\xi_{xx} = 0. \tag{14}$$

The linear partial differential equation (14) can be replaced with

$$\eta'' - \alpha\eta' = 0, \tag{15}$$

through the transformation

$$\xi(x,t) = \eta(z), \quad z(x,t) = x - 5\alpha t, \tag{16}$$

where α is a real positive constant. A solution of (15) is

$$\eta(z) = e^{-\alpha z}. \tag{17}$$

Now equations (16) and (17) yield

$$\xi(x,t) = e^{-\alpha(x-5\alpha t)} \quad \text{or} \quad \xi = e^{5\alpha^2 t - \alpha x}, \tag{18}$$

Equation (10) yields

$$A - \frac{1}{2} + \frac{B_t}{2aB} - \frac{B_{xx}}{2aB} = B\frac{\Gamma_2}{-2a}. \tag{19}$$

Remark 1 requires that $\Gamma_2 = 0$ and we have

$$A = \frac{1}{2} - \frac{3\alpha^2}{a}, \tag{20}$$

where we substituted for B, ξ and their derivatives using (13) and (18). Equations (9) and (20), with $\Gamma_1 = 0$, lead to

$$\alpha^2 = \pm\frac{a}{6} \tag{21}$$

Case-1: $\alpha = \sqrt{-\frac{a}{6}}$

In view of (21), equations (13), (18) and (19) become

$$A = 1, \ B = -\frac{a}{6}e^{-\frac{5a}{3}\ t - \sqrt{-\frac{2a}{3}}\ x}, \ \xi = e^{-\frac{5a}{6}\ t - \sqrt{-\frac{a}{6}}\ x}. \tag{22}$$

Substituting for $\Gamma_n(\xi), \ n = 1, 2, 3, 4$, equation (8) simplifies to

$$F''(\xi) - aF(\xi)^2 = 0. \tag{23}$$

With $a = 6b^3$, the general solution of the nonlinear equation is

$$F(\xi) = \frac{1}{b}WeierstrassP\left[(b(\xi + c_1), \{0, c_2\})\right]. \tag{24}$$

Inserting from (22) and (24) into (7) we have a solution of (7) in terms of Weierstrass function

$$w(x,t) = 1 - \frac{a}{6}e^{-\frac{5a}{3}\ t - \sqrt{-\frac{2a}{3}}\ x}\frac{1}{b}WeierstrassP\left[\left(b(e^{-\frac{5a}{6}\ t - \sqrt{-\frac{a}{6}}\ x} + c_1), \{0, c_2\})\right)\right], \tag{25}$$

where a and b are related through $a = 6b^3$.

Case-2: $\alpha = \sqrt{\frac{a}{6}}$

We here have

$$\alpha^2 = \frac{a}{6} \quad \text{or} \quad \alpha = \sqrt{\frac{a}{6}}. \tag{26}$$

In view of (26), equations (13), (18) and (19) become

$$A = 0, \ B = \frac{a}{6}e^{\frac{5a}{3}\ t - \sqrt{\frac{2a}{3}}\ x}, \ \xi = e^{\frac{5a}{6}\ t - \sqrt{\frac{a}{6}}\ x}. \tag{27}$$

Substituting for $\Gamma_n(\xi)$, $n = 1, 2, 3, 4$, equation (8) simplifies to

$$F''(\xi) - aF(\xi)^2 = 0. \tag{28}$$

With $a = 6b^3$, the general solution of the nonlinear equation (28) is

$$F(\xi) = \frac{1}{b} WeierstrassP\left[(b(\xi + c_3), \{0, c_4\})\right]. \tag{29}$$

Inserting from (27) and (29) into (7) we have a solution of (6) in terms of Weierstrass function

$$w(x, t) = \frac{a}{6} e^{\frac{5a}{3} t - \sqrt{\frac{2a}{3}} x} \frac{1}{b} WeierstrassP\left[\left(b(e^{\frac{5a}{6} t - \sqrt{\frac{a}{6}} x} + c_3), \{0, c_4\})\right)\right], \tag{30}$$

We remark that (Polyanin and Zaitsev (2004))

$$WeierstrassP\left[\eta, \{0, 0\}\right] = \eta^{-2}. \tag{31}$$

Now if we set in (25), $c_1 = 1/C$ and $c_2 = 0$ then (30) reduces to

$$w(x, t) = \frac{1 + 2Ce^{-\frac{5a}{6} t - \sqrt{-\frac{a}{6}} x}}{(1 + Ce^{-\frac{5a}{6} t - \sqrt{-\frac{a}{6}} x})^2}. \tag{32}$$

Again if we set in (30), $c_3 = C$ and $c_4 = 0$ then (32) reduces to

$$w(x, t) = \frac{1}{(1 + Ce^{-\frac{5a}{6} t + \sqrt{\frac{a}{6}} x})^2}, \tag{33}$$

where C is an arbitrary constant. (Cf. Danilov, Maslov, and Volosov (1995), Kudryashov (1993))

III. Results and Conclusions

Direct similarity method is applied to the Fisher-KPP equation is

$$w_t \;=\; w_{xx} + a \; w \; (1 - w), \tag{34}$$

where a is a constant, to reduce it to an equation (28). As there are two cases the solutions in terms of Weierstrass P functions are presented for each case. Known special solutions, namely, (32) and (33) have been deduced for a suitable choices of the parameters appearing in these two solutions. We conclude that the direct similarity method is efficient in the derivation of the solutions of the nonlinear Fisher-KPP equation, and, in general, nonlinear equations. Of course one needs to tract the computation using MATHEMATICA.

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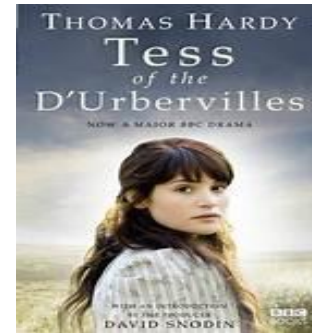## BOOK REVIEW

Book Name: Tess of d'Urbervilles

Genre: Fiction

Author: Thomas Hardy

Publisher: Penguins Classics Publishers

Year of Publication: 1892

Total Pages: 592

Thomas Hardy's "Tess of the d'Urbervilles" is a perfect example of tragic realism, where the harsh realities of life intersect with the dreams and aspirations of its characters. Through the journey of Tess, Hardy crafts a narrative that transcends time, offering profound insights into societal norms, fate, and the human condition.

One of the central themes of the novel is the idea of fate and its inexorable influence on Tess's life. From her initial encounter with Alec d'Urberville to her tragic fate at Stonehenge, Tess seems destined to endure a series of misfortunes beyond her control. Hardy masterfully weaves elements of fatalism throughout the narrative, challenging readers to confront the idea of predestination and the role it plays in shaping individual lives.

Moreover, Hardy provides a caustic critique of Victorian society, particularly its rigid class structure and moral hypocrisy. Tess, as a working-class woman, is continually marginalized and exploited by those in positions of power. Her tragic downfall serves as a poignant commentary on the injustices prevalent in a society that values social status over human decency.

At the heart of the novel lies Tess's internal struggle between societal expectations and personal agency. Despite her best efforts to break free from the constraints of her upbringing, Tess is ultimately trapped by the expectations placed upon her as a woman. Her complex character, torn between duty and desire, resonates with readers as she grapples with the consequences of her choices in a world that offers her little agency.

Furthermore, Hardy's vivid descriptions of the Wessex landscape serve as more than mere backdrop; they become integral to the narrative itself. The pastoral beauty of the countryside stands in stark contrast to the hardships faced by Tess, highlighting the dichotomy between the idyllic image of rural life and its harsh realities.

In conclusion, "Tess of the d'Urbervilles" is a timeless masterpiece that continues to captivate readers with its powerful storytelling and profound themes. Through Tess's journey, Hardy explores the complexities of human existence, inviting readers to reflect on their own place in the world. As a work of tragic realism, the novel serves as both a mirror to society and a testament to the enduring power of the human spirit in the face of adversity.

By

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