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The Question of Subalternity: A Reading of George Ryga's the Ecstasy of Rita Joe

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Abstract – Critics fail to situate the works of subaltern literature beyond the constrained sphere, which includes the voiceless, oppressed, inferior rank; the colonial populations who are socially, politically and geographically outside the hierarchy of power and social groups excluded and displaced from the socio-economic institutions of society in order to deny their political voices. This poses many questions, the inevitable one being: Is there any other way of approaching subaltern literature? This leads to the question: ‘Do subaltern writings always have to deal with the notion ‘voice’ and ‘voiceless’? This paper, because of a confrontation with such conflicts, takes up George Ryga’s play *The Ecstasy of Rita Joe* (1967) as a case study. Through this play, this article reflects upon the notion of ‘subaltern’.

Keywords- *Subaltern; Voiceless; Articulation of the oppressed.*

I. INTRODUCTION

Lamentations comfort only by lacerating the heart still more. Such grief does not desire consolation. It feeds on the sense of its hopelessness. Lamentations spring only from the constant craving to re-open the wound”. (Dostoevsky, 2005, 54)

Oxford Dictionary provides the meaning of the term ‘subaltern’ as ‘inferior rank’. Though the word ‘Subaltern’ has been used in multiple contexts today, originally it was used to denote the junior military officer who is supposed to obey the commands of his higher officer. Antonio Gramsci used the term ‘subaltern’ in *Prison Notebooks* (1971) to denote non-capitalist, non-bourgeois subordinate classes or groups, the proletariat, the peasants, socially unrecognized and marginalized in nature. Bill Ashcroft in *Post-Colonial Studies: The Key Concepts* provides further inputs that ‘Subaltern’ is used to referring to those sections of the people or communities who are under the command of the ruling class and subject to the hegemony of the dominant groups. In this context, in order to document or to capture the history of the society, the facts were distorted and there were many misrepresentations regarding the people at the bottom level of the society. Historians realized the importance of rewriting the historiography of nations to expose the traumatic experience of subalterns they initiated subaltern studies. Ranajit Guha, the most significant subaltern historian, is the founder and editor of *Subaltern Studies*. His founding statement in the article *On Some Aspects of the Historiography of Colonial India* published in the first volume of subaltern studies group defines the term ‘subaltern’ as “the demographic difference between the total population and all those whom we have described as the ‘elite’” (4). Gayatri Chakravorty Spivak, post colonial theorist in her phenomenal essay “Can Subaltern Speak?” has ignited a debate in the domain of literature and history writing whether the subaltern can speak and if they could not speak whether the intellectuals and writers represent the voices of subaltern appropriately. Spivak suggests that it is impossible to recover the voice of the ‘subaltern’ or oppressed colonial subject. So, the scope of subaltern studies has become larger as it has started to address and debate more issues at a larger level.

Interestingly, the development of history writing which represents and tells the story from the perspective of subaltern was reflected in Canadian literature as well. After colonialism, the post colonialism also expressed the fissure created by the colonialism in the history of colonized people and provided space to express the voice of the colonized people also. Many aboriginal writers started to address the marginalization and sufferings of natives.

Among them George Ryga is one of the writers who has successfully and daringly represented the problems and sufferings of the natives through his writings especially through plays.

In this paper, George Ryga's *The Ecstasy of Rita Joe* was studied and analysed with reference to Postcolonial, Subaltern theories of Antonio Gramsci, Bill Ashcraft and Gayathri Spivak. The play is analysed from the perspective that subaltern never remain voiceless though oppressed and deprived of rights. The discussion ensues the conclusion that articulation of the oppression is similar to reopening the wound to attempt the only consolation possible.

George Ryga being a non-native has effectively portrayed the plights of natives and his perspective is entirely different. His portrayal is real and genuine as he had closely worked and associated with the Cree Indians in his father's farm in his childhood. He himself experienced discrimination when he was working with Cree Indians whereas he belongs to minority section in Canada. It was not until 1960s, notably with George Ryga's *The Ecstasy of Rita Joe*, the aboriginals and their problems began to be recognized in the theater.

II. THE EXPERIENCE OF THE MARGINALIZED

George Ryga has chosen 'Drama' and not short story or novel. Drama as a formal literary term, describes the form of writing used for the theater. In this sense, a drama will be a play that features a narrative, which "dramatizes" the human experience in one way or another. According to Ryga "dramatize" means "bring to life" and not "show via exaggeration". The drama text has given the space for adaptation. What we looked at in the performances was that Rita was not one but many and Rita's story demands action. Its language is made of action rather than narrative. In this context, this paper does not underplay or silence the marginalized experience but helps us to comprehend the nuances and intricacies that are often overlooked such as 'speechlessness' and 'discourse'. However, Rita Joe does not get the space to articulate but through the performance, the struggle that she has undergone has been brought forth to light not only in Canada but also all over the world.

The Ecstasy of Rita Joe is the play in two acts, premiered at the Vancouver playhouse, November 23, 1967 and it was directed by George Bloomfield. It is the news story, which reported the murder of an aboriginal woman in a poor area of Vancouver inspired Ryga to write the play. It has an important place in the history of modern Canadian theater, as it was the first play to address the issue of aboriginal peoples. The online Wikipedia on *The Ecstasy of Rita Joe* asserts that The Canadian Theatre Encyclopedia calls the play as "seminal in the history of Canadian theatre" and considered it as the most historically significant play and states thus:

[It is] not great for what it is as much as it is great for what it promises and what it offers the imaginative creative team... flashes of dramatic brilliance and also the historical aspect of the work's timing; this was one of the first works about Native Canadians mounted on a stage and taken seriously. (n.p.)

Rita Joe, a young Native-American woman, is the protagonist of the play comes to the city from the reservation where she grew up, seeking for a better life. However, the city is something alien to her and she does not belong to it. She represents the native and indigenous perspective in a colonized nation, where the natives and the colonizers are of different worlds, with neither understanding the other. She soon loses her job and is arrested for various crimes like prostitution, vagrancy, adultery and theft. In the court also she is marginalized and though she speaks the whites are not in the position to understand her. There is no space to her articulation.

There are other characters to represent both the native Indians and Whites. Jaimie Paul, lover of Rita Joe, her sister Eileen Joe, her father David Joe and some nameless Indians are from the category of the Indian community. On the other hand, there are characters such as Magistrate, Mr. Homer, Priest, Teacher, Social worker, the Police officers and some nameless men from the White community.

III. HOSTILITY

The play begins as a trial. Rita Joe is the defendant alone and without representation, against a policeman, who acts as witness against her and the magistrate, who will decide her fate. As the opening lines seem that he is determined to be stern but fair. The following statements of Rita Joe clearly show how the White people are hostile towards the native people.

RITA: (with humour, almost a sad sigh) The first time I tried to go home I was picked up by some men who gave me five dollars. An' then they arrested me
 MAGISTRATE: Thousands leave and enter the city everyday ...

RITA: It wasn't true what they said, but nobody'd believe me ... (Ryga, 1970, p. 4)

Racial Discrimination in Rudyard Kipling's *the Jungle Book* and *the Second Jungle Book*

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ABSTRACT

Before the invention of the printing press books for children were hand written and were in the form of lessons. At the advent of the 15th century and after the invention of printing press slowly books for children started increasing. By and by in the 19th century children's literature focused on themes like realism, fantasy, amusement, alienation and its likes. The *Jungle Books* revolve around the theme of abandonment and law and freedom. Kipling constantly sticks to the theme of abandonment and fostered child, as he recalls his own childhood feeling. Children wandering in the forest used to be a common thing and chances of them falling a prey to the wild animals was a common thing. Mowgli's tale is that of being alienated from the society. The *Jungle Books* reveal the elements and causes of alienation namely difficulty in communication, marginalisation, ecological alienation, sociological alienation and physiological alienation

"The Law of the Jungle, which never orders anything without a reason, forbids every beast to eat Man except when he is killing to show his children how to kill and then he must hunt outside the hunting grounds of his pack or tribe..... The reason the beasts give among themselves is that man is the weakest and most defenseless of all living things, and it is unsportsman like to touch him." (pg.1)

The above lines from the text shows the prediction of upcoming danger in the form of Ecological alienation. Mother and Father Wolf always thought about their communities' survival and safety because they know, if the tiger starts to hunt, wolf's community would be affected and forced to be alienated from their land. The Law of the jungle was never to eat Man cub because it would create violence between human beings and animals. If a man or animal go against nature, that always led them in the path of destruction which meant the end of life. Thus the sign of violence is presented in the very beginning. Another Law of the Jungle is that no animal should attack any animal when they are drinking water in the Waingunga river because animals know there is no life without water. Water is a symbol of life, motion, renewal, blessing, intuition, reflection, subconscious, fertilization, purification and transformation. In other words, Waingunga river is the perfect world for the animals in the *The Jungle Book*, and that no animal would have liked to leave such a place. Leaving the place would be self-alienation.

Akela, the leader of Seonee wolves has all the qualities necessary for a leader like honesty, integrity, confidence, passion, inspiration etc but is alienated because of his fragile body due to old age. This is a classic example of sociological alienation. Difficulties of communication, adaptation, identity, cultural shock and marginalization reflects the themes of alienation. Mowgli does not want to be alienated. He is forced to live with human community when he is sent away by the wolves. The nature of Mowgli's life is different to that of the villager's life and it became

harder due to lack of communication. Mowgli by leaving the forest experiences sociological alienation, ecological and psychological alienation. The following is an example of his loneliness.

'Come Soon', said Father wolf. 'Oh, wise little frog, come again soon; for we be old, thy mother and I.'

'Come Soon'. Said Mother wolf, 'little naked son of mine. For listen, child of man, I loved thee more than ever I loved my cubs.'

----- The dawn was beginning to break when Mowgli went down the hill side alone to meet those mysterious things that are called men.(pg 45).

Bander Log, the monkeys are disliked by people. The animals in the jungle alienate the monkeys as they are notorious (ie) known for stealing. The monkeys are forbidden as they do not have any law and are considered as an outcast in the jungle and society. At one point of time Mowgli realizes that he is no longer going to be a part of the wolf pack, he is forced to assert himself using fire to scare off his detractors. Once he chases most of the pack away except Akela and a few others who support him, he is filled with emotions and feels physical pain as a result of the overwhelming despair. He begins to sob but has no idea what tears are, because he has never cried before. He thinks he is dying and asks Bagheera what is happening to him. Bagheera explains only men cry and his strong feeling mean he is become a man. Mowgli's tears symbolize the reason that separates Mowgli from the animals. On the other hand when he enters the village he is confronted by the yellow Pariah dogs who always bark at the strangers and now they bark at Mowgli. Though he lived amidst animals he is unable to bear the barking of the dogs. Mowgli feels alienated when he enters the village as he is seen as an untouchable living in the Seonee hills. Mowgli did not know to speak or express what he wanted. In one instance he opens his mouth and pointed down to show that he wanted food. But people including the priest shouted at him. Here Mowgli compares people with the Bander Log who are ill-mannered. He could not sleep in the house as he had always slept in open space when he lived in the jungle. Messua considers Mowgli to be her lost son and hence takes care of him.

The consequences turned to be otherwise for Messua and her husband as they had given shelter to Mowgli. They were driven always from the village and this incident reiterates that they are socially alienated. Mowgli undergoes humiliation as he is treated as an outcast and is tortured by the children though he is a human child. In the jungle the grey brothers considered him to be their brother. Mowgli recollects all these incidents. Though he tries to adjust in the village, he is mocked by his own people and such instances show that Mowgli was both socially and psychologically and ecologically alienated. He is attacked both by the animals and human beings. Towards the end of the story he accepts the reality and understands no to rely on others. Mowgli is a biological child of human beings but the village priest and the people force Mowgli and his parents to leave their place. Mowgli tells that the man-pack and wolf-pack have cast him out.

In his article 'Kipling As The Chronicler Of The Empire : Ambivalences And Archetypes C.N. Ramachandran says that the two Jungle Books and the Mowgli stories establish a world based on Law and Order beyond any contradictions. The treatment of alienation is thus a major thematic preoccupation with Indo-English novelists. Their heroes are Existentialist protagonists who are 'alienated from nature and society.' Quest for identity revolves round *The Jungle Books*. Mowgli grows among the animals and hence is connected with the human and animal world which resulted in identity crisis. He looks like a human and hence he is not accepted by the animal society because of his intelligence. He is not accepted in the human society as well because his behavior is unique

Dalit Woman- “An Oppressed Individual” in the eyes of Bama

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ABSTRACT

Dalit literature represents the lives and voices of generations that have passed. Emancipation, Awakening, Recognition, constant perpetual struggle to represent their roots and identity in the society are the indispensable themes dealt in this genre of literature. Emergence of writers in this variety of literature is an eye opener, representing their plight forcefully and powerfully. This paper explores innumerable agony, pain and the hopeless condition of women. Atrocities and violence on Dalit women continues unabated. This paper unfolds the sufferings, harassment and turmoil of Dalit women with reference to Bama’s reverberating novels ‘Karukku’ and ‘Sangati’.

Keywords: Oppressed, Emancipation, Marginalized, Plight, Alienated, Valour, Exploited Community, Despair and agony.

1. INTRODUCTION

Dalit literature embodies itself as a literature of strong protest. Protest against age old cultural tradition and social discrimination perpetually against woman, where they have been brutally victimized for very many generations. This literature has gained momentum and has acquired identity and has created a unique place among other world literatures.

“Dalit literature resonates the oppressed, broken, marginalized and alienated and exploited community. It represents the atrocities unraveled ruthlessly to the people particularly women. It predominantly portrays the liberation of the oppressed. Dalit literature conceives recreation, resurrection, revolution, liberation empowering the weak and oppressed. These are some of the characteristic spirits of this genre of literature. The works adorning this genre of literature kindles a new awakening in the minds of the reader, representing pride and have sought to writing as their weapon to reach out to the people. The impeachable works provide a detailed account of culture, deep rooted tradition, the wide gap arising because of discrimination. Dalit literature stands against all odds as the highest peaks in the field of literary works.

The works predominantly center on feminist perspectives; women writers of this literature have drawn an analogy. The theories pertaining to the literature presents vividly, the struggle to come out of the past, to create a new dawn and aims desperately to create a bright future, to compensate all the losses that they have faced in the earlier days. The concepts of economic, political discrimination, alienation and marginalization are the key issues that are being stressed time and again. Writing in these literatures opens up new avenues and forms a long traditional hierarchy, which has come to stay for very many ages that are yet to come. In order to fulfill this thirst or quest for empowerment, the need of literacy among the masses plays a crucial and decisive role. Thus

literacy leads to many developments, it freely scrutinizes the past and produces a huge wave in the present, backed and supported by 'history' and 'myth'.

The main concern of Dalit writers is to dismantle all the negative assumptions that surround their works and the need to create an improved social and constructive atmosphere. In the societies women folk have been marginalized and suppressed by the political community as well as their own men folk, Women today are engaged in guerrilla war with their oppressors through the medium of writing. Pioneering women writers of Dalit literature are Mahasweta Devi, Bama and Sivagami through their works they are creating a revolution in the society. These writers are not leaving any stoned unturned to draw the attention of the world, to their own identity and the whole community. The process of inventing the roots of their communities is an ongoing process. The outlook induces a nostalgic feeling of the past and great admiration of their native culture; the writers try their best in bringing this essence in their writings. The common denominator that binds is their suffering, their roots, sensitivity and the value that they give for their native tongue and tradition, discrimination and exploitation. Dalit literature to a large extent has been a Protest literature and a representative voice for the voiceless society and fighting earnestly through all means to establish social equality and harmony among all people.

Women's writing was actually a rapid and powerful undercurrent that portrays women's struggles. Women writers argue that oppression and discrimination are inextricably bound together, the intrinsic psychodynamics of a women's mind is presented loftily.

Among prominent writers Bama, an Tamil Dalit writer has occupied a significant position, her two thought provoking novels 'Karukku' (1992) and 'Sangati' (1994) have been dealt in this paper. Both these works draw the attention of the reader. Karukku has the distinct identification, as the first unique work, which upholds feminism. It was first written in Tamil in the year 1992 and later was translated by Lakshmi Holmstrom. Karukku, thoroughly reveals the strong valour and the mental stability of the marginalized women. This novel widens the horizon for Dalit women. It explores the voices of the unheard people. It also deals about caste consciousness that prevailed in the Catholic Church.

"My mind is crowded with many anecdotes; stories not only about the sorrows and tears of Dalit women, but also about their lively and rebellious culture; their eagerness not to let life crush or shatter them, but rather to swim vigorously against the tide; about the self-confidence and self-respect that enables them about their passion to live life with vitality, truth and enjoyment; about their hard labour. I wanted to shout out these stories" (Bama 2005: IX).

Karukku is born out of Bama's inner feelings and experience, and whatever has been penned down is the first hand experience that Bama herself has undergone, and she has been brought up in such an environment. Each and every line written is not exaggeration or overflow of emotion. The truth though it is hard to accept the real fact is that even today women are ruthlessly and brutally massacred. Karukku conveys the message strongly that taking the life with all its joys and sorrows, each and every day woman undergo new experience and new wounds, it will take time for the wounds to heal after which the woman has to fly to explore unknown destination. Women though they have undergone many pain they try hard to lead life with certain happiness, still she has the courage to fight against situations and a strong desire to live.

Another mind blowing novel 'Sangati' by Bama gives a glimpse of the entire Dalit community as a whole and the different roles that woman take up. Description of violent treatment faced by women in the hands of her father, brother and husband, Bama explodes boldly through the entire book, about how a woman is vulnerable to sexual harassment the psychological and mental turmoil that she undergoes. The highlight of this impeccable work is the admiration the author has for her

**Between the Living and the Dead, Nobody Becomes Somebody:
Delving Into the Identity of The Child in Neil Gaiman's Fantasy Novel
*The Graveyard Book***

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ABSTRACT

Who Am I? is the constant question that arises in every man's mind. Having a sense of 'belonging' is a common expectation of all human beings. Some belongs to a country, where some belongs to a community. The sense of 'belonging' is a human thing. For many countries, around 75 percentage of their Literature tells about the quest for their Identity. It can be the identity of a country or a community or an individual. The quest may differ in searching for their origin or themselves. In Children's Literature the question of Identity is frequently discussed topic across the globe. From Alice to Harry Potter the question of Who Am I? is the common problem in the texts of Children's Literature. This paper begins with an introduction to the subject of belonging in Children's stories and then looking at its meaning in order to study the concept of Identity. This research paper has clearly dissected Neil Gaiman's fantasy novel *The Graveyard Book* to explore how the male protagonist Nobody Owens is searching for him identity and where he belongs to. This search starts from his childhood stage onwards when he has been orphaned in a graveyard. Though the novel has many fantasy characters like ghosts, ghouls, vampire, werewolf and night – gaunts, the real human character's quest for his identity plays the vital role as realistic theme. All protagonists of Neil Gaiman has the common problem of searching oneself, but in *The Graveyard Book* it is the male protagonist Nobody Owens, who is in between the living (outer world) and dead (in graveyard) searching for his place.

Key Words: Children's Literature, Identity, Fantasy, Neil Gaiman, Realism

1.INTRODUCTION

"Not belonging is a terrible feeling. It feels awkward and it hurts, as if you were wearing someone else's shoes."

- Phoebe Stone.

"It must be good to have somewhere that you belong. Somewhere that's home."

- Neil Gaiman.

Belonging means acceptance as a member in a group, the group may be based on the race, religion, culture, language and the ethnicity, it can be a small group or a huge community. Every human being longs for their unique identity from other groups. In Literature 'identity' refers to the author's adoption of a new language and culture as a means of expression, following a migration from his country to another. Whereas in Children's Literature 'identity' refers to the sense of belonging of the child in the literary piece. Children's Literature is the genre written for the children by those who are not children. The other Literatures, for example, the Post Colonial Literature are by the countries once they were colonized, Women Writings are exclusively written by and for women, whereas the Children's Literature is for the entertainment and information for children or young adults. These literary works are written by adults for children.

Comparatively all other academic disciplines in literature are defined either by periods or movements or places or approaches, but in Children's Literature, it encompasses all such approaches. There are some approaches that focus on the interplay between image and text, some arising from the study of childhood and some approaches focus on the target audience. The term Children's Literature has a largely unproblematic meaning. In today's world Children's Literature are the works that refer to the materials written to be read by the juvenile readers. But recently, as large numbers of adults have been reading the works of J.K. Rowling's *Harry Potters Series*, Philip Pullman's *His Dark Materials* that are originally published as Children's Literature. There has been some serious discussions whether such books are suitable for adults.

"For in every adult there dwells the child that was, and in every child there lies the adult that will be."

- John Connolly

Though the terms 'Child', 'Childhood', 'Children' and 'Adolescence' are regularly used in relation to Children's Literature, there is no perfect vision of childhood in Children's Literature. A Child can be portrayed as very lovable, innocent, educable, civilizing or in some works there are also depictions of many child characters with lots of negative characteristics like evil, bully, brutish, savage etc. These Child Characters come from many backgrounds, such as in groups and as individuals, will have a range of needs, abilities & experience, so it is impossible to identify a single characteristic common to writing for children. Psychologically every work meant for children deals with psychological issues like identity, alienation, racism, regression, etc. In Psychoanalytical terms, these problems of the child lead to anxieties and depression, which lie deep in the unconscious mind of the child. Identity is one of the most important parts in the development of the child's mind. It is a kind of self-awareness of the child that tells the child what is their origin? or where she or he comes from? or who she or he is? At the very early age itself the child began to search for its identity. The eagerness in every child will ask them 'Where does she/he belong to?' The child's identity is the most complex socio-cultural phenomenon, which involves the different aspects of a child asking about themselves, about the family, about her or his world. The child's identity is a powerful notion that is speedily changing under the influence of the family, education and the world. The word "Identity Crisis" was first formulated by the famous German-American psychoanalyst Erik Erikson.

"In the Social Jungle of human existence, there is no feeling of being alive without a sense of Identity."

- Erik Erikson

LOVE AS KNOWING: A STUDY OF MORAL CONSCIOUSNESS IN ROBERT PENN WARREN'S MEET ME IN THE GREEN GLEN

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If you have loved somebody, you know how it is,
how you tear your heart out, just to give it away,
and that is a great joy. (358)

Robert Penn Warren is one of the greatest American writers whose span of literary career has expanded for sixty years. He has produced works in all the genres of literature. His writings express his moral vision through his poetry and fiction. He has categorised his moral values in his essay "Knowledge and the Image of Man". He has written nearly ten novels and his novels delineate characters achieving self-knowledge. Some characters indulge in doing evil activities, some characters turn to love to get their moral consciousness. Warren seems to emphasise that pity is the essence of humanity and man should show sympathy to his fellow.

Meet Me in the Green Glen is a remarkable novel where Warren brings the power of love as source of knowing oneself. Love is being and it helps to have the process of becoming very effectively. Love means sacrifice. Love dissolves ego and arrogance. Love will overcome the bitterness of the hatred. The paradox of love is revealed by Juliet in *Romeo and Juliet* "My only love is sprung from my only hate." Love and hate are paradoxical and love blossoms where hate prevails. Such love is often said to have power of divinity.

Cassie Killigrew Spottwood is the chief character who experiences the process of getting knowledge through and initially she is pictured as a woman who has lost all the happiness. She merely exists, not living. She is caught in undesired marriage. The first sight of her tells the readers that she is a woman cursed for torture and suffering. It has become her habit to look beyond her window, the world outside where she finds the road, the creek, and the red-clay-colored water. For hours together she gazes the world outside through the window.

She did not know how long she had been at the front room window. She stood there, with one hand holding back the tatter of lace curtain, and stared across the yard and over the fallen-down picket fence and down the road where it ran alongside the creek. (3)

This picture of Cassie presents her mental state which is devoid of love and affection. The reason for her suffering, as she wants to blame is her mother. She is sent by her mother during her early days to look after Josephine Killigrew Spottwood, who is her mother's sister, married to Sunderland. She goes to take care of Josephine who is suffering from Tuberculosis. Cassie reminds of Thomas Hardy's Tess who is sent to Alec's house for job at the wrong time of her life. She is seduced by Alec and loses her life. Everything happens at the wrong time in her life. Similarly Cassie's arrival at the Sunderland's house proves to be fatal for her. Sunderland often visits stealthily Cassie's room with a lustful intention.

Sunderland is much elder to her. He waits for the death of his wife. As soon as Josephine dies, he forces Cassie to marry him. She feels caged. Her married life doesn't bring any pleasure into her life. Sunderland treats woman as her property. He develops an illicit relationship with the Negro woman named Arleta after his marriage with Cassie. When the Negro woman becomes pregnant he gives a huge sum of money. When Cassie questions about this she shuts Cassie's mouth. Cassie feels humiliated. Cassie's suppression and her inability to express herself lead to her mental imbalance. At her mother's death she is not able to cry but laugh at her.

Soon Sunderland becomes paralysed and Cassie has to take care of him. Murray arranges to bring her home to take care of her husband. Whenever her husband raises some 'noise' she goes to him and does her service he needs. The rest of the time she used to sit near window longing for love and affection. Sometimes she used to see in fancy: "I see a man and he is coming down the road." (5)

Cassie's man comes into her life. He is Angelo Passetto (Sicilian), a convict. He has been convicted for a robbery and has been on parole. Angelo has lost his father eleven years ago and he has gone through a tough life. Cassie meets the young Sicilian Angelo only at this point of her life. Angelo's arrival brings a lot of transformation in Cassie's life. Angelo doesn't have anything in Cassie because she is elder to him. Angelo used to visit Cassie to do the job of a handyman. She allows him to stay in her house. One day she becomes unbearable and she goes to Angelo's room and buries her face on one of his pillows and cries. Angelo gets irritated and in his mood of irritation he performs a loveless sex with Cassie. This loveless act ignites the love between Angelo and Cassie. Angelo starts to spend much time with her and he buys gifts for her. Sometimes he combs her hair and adorns her with red ribbon. She is delighted:

"But I never felt pretty—not before—and a girl ought to feel pretty—and it's awful to be old and of a sudden feel pretty. And I'm old—I'll be forty-three, in two weeks, Angelo—oh, Angelo!...Angelo—you made me pretty—and oh, I can't stand it!" (163)

Angelo and Cassie become close and Cassie loves Angelo because she feels that Angelo gives her the needed love and affection she has been denied from her husband Sunderland and also from Cy Grinder her former lover during her younger days before she is trapped by Sunderland.

Cassie recollects her younger days when she has fallen in love with Cy Grinder, her neighbour. Cassie dates with Cy Grinder and plans of marrying him. But Cy Grinder is not confident of his social position and he desires to upgrade his studies in a correspondence course. Cy Grinder's dream to

Classroom Communication in Engineering and Arts at Undergraduate Level in Indian Context

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Abstract: *Effective classroom communication is the highest challenge to teachers at undergraduate level in this 21st century. Owing to the higher level of exposure to internet and distractions through entertainment, when teachers stand in the classroom to establish an intellectual communication that is transmission of ideas, so many factors disrupt the effective communication between the teacher and the learner. The role of a teacher has also become a facilitator, which is diminishing the rigidity of a teacher. A facilitator is supposed to impart knowledge and skill using all the latest technological advancements like power point presentation, computer assisted teaching, using internet, you tube videos and online learning platforms etc. The challenge is that the facilitator should excel the machines and internet by maintaining classroom dynamics to make the teaching-learning process interesting, lively and fruitful. This paper is an attempt to delineate the salient features of effective classroom mechanism at undergraduate level in arts and science, maritime and technical education. It presents the importance of communication as a dialogue in classroom, learner participation, the reasons for non-participation, classroom management strategies and limitations, actual process of long lasting learning amongst Engineering, Arts and Science domain learners, the necessity of experiential learning and the requirement of skills based teaching and learning.*

Keywords : *Communicative Language Teaching, Interpersonal communication skills, Skills based learning, teaching and learning in 21st century.*

I. INTRODUCTION

Communication in a classroom is mainly intended to share knowledge, skill, motivate the learners for self-study and inspire them by being a role model, so classroom communication takes place at different levels both at physical and mental space. Mohd. Yusof Abdullah says in his *Student's Participation in Classroom: What Motivates them to Speak up?* "learning is acquiring new or modifying existing knowledge, skills or behaviours. Therefore, if learning is defined as quest for knowledge, skills or behaviours, then students need to be active in that quest" (Abdullah, 2012, p. 517). These objectives can take place effectively through activities based teaching coupled with lectures. Since syllabus covering requires lecture mode, syllabus-uncovering demands activities based teaching to enable the learners

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discover their potential. The key factor behind classroom communication is learner participation, which makes learning process more dynamic, lively and productive. Harry G. Murray and Megan Lang state in their "Teaching and Learning in Higher Education", "it is widely claimed that active student participation in the college classroom facilitates both acquisition of knowledge and development of problem solving skill" (Murray&Lang, 1997, np). In between the entry behavior/ knowledge/ skill and exit behavior/ knowledge/ skill, the process of development takes place through classroom communication. The importance of a facilitator is assured through the kind of rapport he/ she can hold with the learner especially good interpersonal communication, which defines the teacher-learner relationship mainly at undergraduate level, where the learners are very new to higher education.

In India, Engineering and Maritime education fall under All India Council for Technical Education and Directorate General of Shipping respectively. For both, application and outcome based syllabus design and teaching modes are prioritized whereas CDIO (conceive, design, implement, and operate concept) is in the vogue internationally. When the learner do not participate in class room communication, even then he sits passively absorbs the content and in addition to that exam preparation enables them to reproduce the learned concepts in exam answer sheets, finally results in gaining marks. Whereas a learner who actively participates in discussions, presentations and skill based training, dynamically involves oneself in the process called learning, which in turn strengthens their learning process and confidence. Though initially they are likely to commit mistakes, through the wrong answers and performance in any skill based activity/ training, they try to find its solution or answer – where actual learning through trial and error occurs. When the under graduate learners are motivated through such participation mode, in later stages in their post graduation or research level, this training could enable them to contribute new findings. Mohd. Yusof Abdullah restates Siti Mazih's result that students can "learn how to think critically and enhance their intellectual development if they are in active participant in the classroom" (Abdullah, 2012, p.62).

II. PROPOSED METHODOLOGY

While participation plays a vital role in moulding the personality traits, confidence, academic performance and skills proficiency, this paper analyses the cause and reason for non-participation of learners asserting the vitality of participation. When an individual learner's progress is of pivotal importance, on the other hand overall classroom management is another important aspect to the teachers. The study delineates the factors causing effective

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and proactive classroom management strategies and its limitations.

Feedback from hundred and fifty undergraduate Arts and Science students representing the interesting and effective classes that they had during the first two years of study is collected and represented through tabular form. In addition to that, the same feedback is taken from hundred Engineering and nautical science students also. A comparative study between the average of the factors contributing to interesting and productive classes is presented with graph, analysed and further recommendation is also discussed.

III. LEARNER DO NOT WANT TO PARTICIPATE

There are a list of reasons based on which a learner do not want to participate in classroom communication/ activities. They are language barrier, lack of interest in studies, class room physical ambience is not conducive (very cold/ hot or sweating extremely), personal issues, teaching mode is monotonous, not interested in subject, difficult subject/ concepts, distraction by wrong association (friends) etc. Mustapha et al. state in their *Factors Influencing Classroom Participation: A Case Study of Malaysian Undergraduate Students*, “Negative classmate traits ranked highest in the list of most frequent factors mentioned as discouraging students participation” (Mustapha, 2010, p.1082). Compared to negative learner attitude, negative lecturer traits are ranked second in the case study and the third one is “negative student trait” (Mustapha, 2010, p.1082).

On the other hand, there are certain qualities, which intensify effective classroom communication. Prime factor is calling the learners by their name that can establish a good range of interpersonal communication between the teacher and learner. Apart from the subject knowledge, a teacher establishes a good rapport with the learner by this habit. A teacher can make the learner participate by calling them by name – when he/she does it, an obligation or proper explanation is likely to rise from the learner. While Positive learner attitude and classmate traits are essential on learners’ side, lecturers with sense of humour, open-minded, approachable, friendly, “flexibility to make the learner challenge each other’s opinion and accept different point of view” (Mustapha, 2010, p.1081) are the important factors to facilitate learner participation.

IV. IMPORTANCE OF PARTICIPATION

Active participation plays a vital role in refining the learner skills, increasing the level of confidence and grooming one’s personality. In the beginning, they may give wrong answers or the performance is not up to the mark, or altogether they do not participate, but gradually they modify their performance on their own through which they cultivate their skill and ability. Mustapha highlights Tatar’s view in his study “Why Keep Silent? The Classroom Participation experiences of non-native-English-speaking students” that active classroom participation can play an important role in the success of education and students’ personal development in the future.

Active student participation can be made mandatory by regulating the teaching-learning system by providing equal importance to less motivated or interested learners. Harry G Murray, and Megan Lang in their study “Teaching and

Learning in Higher Education” insist that there is a tendency for motivated and brighter learners that they participate more frequently in class, perform better than less motivated or brighter learners (Murray & Lang, 1997, np). It becomes important that they enable every learner of the class to actively participate in discussions and activities. Teacher-learner communication in classroom can be productive when it is a dialogue than monologue to create simulated experience to the learners to improve their psychomotor skills. For instance, now-a-days, group discussion and individual presentation are mandatory to assess the learners’ communication skills. While assigning such activities, it becomes essential that it fall under regular assessment pattern. That is a most compelling factor to the learners to enable them participate compulsorily in the activity. Even if the learner is not able to participate during that particular class hour, when it comes under assessment, the learner becomes more conscious to complete his/her turn at least in the subsequent class hour. Usually, when the class strength is around forty, it takes nearly four working hours to make each one participate for at least five minutes/each. In addition to monthly assessment, there will be a summative assessment (end semester) where again the learner is made to actively participate in intellectual/ skill based presentation. They are provided with more number of simulated compulsory contexts through exam for practice and refinement of the skills.

This practice and training is effective with undergraduate learners as they are new to the college level learning and their experience was limited in school curriculum, where they were limited to syllabus-bound learning. They are expected to step ahead into syllabus-free learning and contribute through innovation. The most important hindrance is that they are very much unfocused teenagers during under graduation first year. Most of them are with the mindset that the next three years are meant for enjoyment. It becomes the responsibility of the facilitator to enable the learner to actualize his/ her needs, requirements and future goals including career. Since India is in second position in population, classroom learner strength is in between 40 and 70 learners/ class. When the facilitators propel training based communication skills development class, classroom management is quite challenging. Online *American Psychological Association* defines that “classroom management” is the process by which teachers and schools create and maintain appropriate behaviour of students in classroom settings. The purpose of implementing classroom management strategies is to enhance prosocial behaviour and increase student academic engagement. Effective classroom management principles work across almost all subject areas and grade levels. It poses challenges not only to the school teachers but also to the college professors of under graduation since the learners are deeply distracted by their teenage fascinations, mass media, computer games and parents who are employed find least time to look after their teenage adolescent boys/girls.

A Study On The Importance Of Research In Community Radio Programs

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ABSTRACT

The examination of radio as a medium cannot be justified without taking into consideration, the magnanimous role of community radio. It is often described as a third tier broadcasting medium along with public and private radio broadcasting. Just like the nature of a democracy, community radio is a medium designed by the people, of the people and for the people of a community, to serve the needs, aspirations, interests of the community. Community Radio (CR) gives marginalized people, a platform to voice out their opinions and be heard by all. A significant tool that facilitates education and infotainment, community radio is generally held by voluntary organizations, civic groups, NGOs, educational institutions, women's groups, etc to facilitate the change the society is in dire need of. Community radio is fundamentally not a technical enterprise, but a venture into building humanity. Such a powerful medium, which has brought several communities together, requires extensive research to design the content of broadcast in such a way that it truly empowers the people of the community and facilitates a positive shift towards the ultimate development of the community and the society as a whole. This paper will discuss why this is so and how this is being done currently and will also throw light on what can be done further to enhance the field of research for Community Radio and its programmes.

KEY WORDS: Community Radio, NGO, Radio Broadcasting, Development Communication

Introduction

With the advent of new media opening up various avenues for education, entertainment, information and infotainment, the role of mainstream media has been replaced significantly, thanks to the competencies and creativity that new media has imbibed in itself in the past decade. In such an arena, mainstream media is expected to be more innovative, user friendly, and more feedback oriented to become the 'go-to' medium for audiences. This calls for a revamp of the broadcast content by mainstream media houses, for them to compete in par with new media. A revamp not only requires ingestion of new and creative content, but also the elimination of that content, that do not fit the dynamically changing media industry and audience anymore. This inevitably demands a thorough research across the fabric of the media industry, involving the study of consumer needs and expectations, potential competition, and an extensive SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) by media houses that will elevate them to the subsequent levels in the process of attaining that 'go-to' status. It is the study of the effects of the different mass media on social, psychological and physical aspects. Research survey that segments the people based on what television programs they watch, radio they listen and magazines they read.

Talking about research, one particular medium that perfectly fits into the glove is radio, which has been reaching more and more audiences every day. Radio broadcasting is any use of radio waves to send messages to large groups of people which is used to send audio signals such as talk or music programming. Thanks to its portable, cost effective, inexpensive, simple, and quick nature, radio is becoming a part of audiences' daily life. The entry of private players into the broadcasting fray has been one of the paramount reasons for this boost in listenership, which was previously much insignificant because of lesser options and conventional programme formats. Today, we have radio stations competing with each other in grabbing the market share with their thematic programming styles, interactive audience participation, making 'visualization' in programming possible through effective writing for radio, and so on to such an extent that audience have started directly or indirectly playing a major role in the programming for radio.

What role does research play in community radio programming?

- Community Radio Programming Research helps in facilitating interaction between the political leadership and the community. This is because it aims at finding out

COVID-19 AND THE IMPACT ON INDIAN ECONOMY - WITH SPECIAL REFERENCE TO MICROFINANCE INSTITUTIONS

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ABSTRACT

The ramification of the COVID 19 crisis has made not only on health of people at large, the damage that it has exhibited and will extend more damage than the disease itself. Pandemic made the business sober, liquidity tight that affected the scale of operation in almost all business sector and regions of the world economy. In developing countries like India the impact of the covid19 for the most vulnerable group of people especially informal workers, farmers and Micro and small enterprises (MSEs) is under stress due to the measures carried out for controlling the crises . The buoyant poor populations depend on microfinance services for even basic savings accounts, small loans, and remittances. When such microfinance services publicly funded their safety nets will be less. Microfinance service providers such as Microfinance Institutions and other regulated providers from banks to NGOs face threats to their own existence. Slackened earning capacity of their client's menace the repayment culture on which the microfinance sector depends. The MFPs rescheduled loans either voluntarily or by the orders of authorities that in turn made client repayment nil and ongoing operational expenditure diminishes reserves which made them unable to meet their own debt requirements and liquidity needs. Following conventions that can help the regulators: a) reaching poor people directly and tailor relief measures b) to have a clear timeframe with a scope of function and the game plan of exit, c) the measures for all the microfinance providers (MFPs), d) protection of the safety and the integrity of the microfinance providers, e) supervisory process must be altered to lessen nonessential hindrances on authorities as well as the Microfinance Providers. The resultant understanding of the crises can be shared at the policy level and help the policy makers to "Build back better" a more buoyant microfinance sector.

Key Words: COVID-19, Indian Economy.

COVID-19 has affected almost each and every business sector and also all region of the world. Microfinance sector is no stranger to crisis; still the COVID-19 pandemic is different. Unlike the earlier downturns which evolved from financial markets, the present crisis is spread through an invisible virus which is being very difficult to contain and control. It creates social disruption and changes the way we live and changes the way we live and work¹.

In 2016, the crisis of demonetization in India has created turmoil in financial markets and only spread to financial and real economy with the rest of the world after some time delay. The spread of COVID-19 pandemic is more radical and abrupt, the effect and spread very is also very fast. The real economy has been put out of action immediately by suffocating market supply and demand simultaneously.

Plentiful of micro- and small businesses were ordered to stop operating or even use alternative use of communication avenues with clients and sell their products and services. Various small businesses, including clients of MFIs, have suspended or even shut down their economic activities, which left the owners and workers without income and employment. This constrained the microfinance institutions which themselves were facing their own internal barriers to maintain their main activities during the mandated lockdown and social distancing rules imposed by the government.

The restrictions like social distancing and others were intended to slowing the spread of the disease, that has resulted in sharp declines in economic activity as businesses were ordered to close and workers stay at home, handful of them were working on a limited scale though. For a long period people were ordered to isolate and avoid participation in public gatherings, which resulted in a drastic and abrupt measures weighed heavily on the domestic demand for goods and services and reduced the domestic supply. This unevenly affected the self employed as well as micro entrepreneurs who were the major client segment of microfinance institutions in India.

The COVID-19 emergency made numerous threats for MFIs from difficulties in disbursements, collection of reimbursements to meeting with clients face-to-face, and also in reorganizing internal systems and flow of work. Thereupon, many MFI's portfolio performance got deteriorated although at different rates in different parts of the world. The impact was not

¹ Impact of COVID-19 Pandemic on the Microfinance Sector in Europe: Field Analysis and Policy Recommendations, Kinga Dąbrowska, Piotr Koryński, Justyna Pytkowska, September 2020.

Gender Gaps Among BRICS Countries

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[The contribution of emerging economies towards various economic indicators is worth noticeable in the present scenario. BRICS which is an association of the emerging economies comprising the Federative Republic of Brazil, the Russian Federation, the Republic of India, the People's Republic of China and the Republic of South Africa are projected to remain the main drivers of growth in the world economy by 2030.]

The BRICS nations' contribution to GDP ever since it was formed in 2010 is highly noteworthy. As on 2018, the total annual GDP of all the BRICS nations was 20,016,182 million dollars with China having the highest share (13,407,400 million dollars) and South Africa with lowest share (366,298 million dollars). But, in terms of GDP per capita, Russia has the highest figure i.e., 11,473 dollars and India recording the lowest figure of only 2009 dollars. Despite positive projections on the side of the BRICS nations, the global ranking in terms of gender is not found to be satisfactory enough as there are gaps in key areas of development.

Hence, 'gender' as a factor deserves special attention in the current context in order to bring about a holistic development of these emerging economies where the female community is handicapped due to the perceived biases and disparities that they experience in their walks of life. This attributes to gender gaps in several areas thus disabling the women community to share an equal platform with men.

The Global Gender Gap Report of 2018 released by the World Economic Forum throws light on the ranking of nations through Global Gender Gap Index based on achievement of parity in four indicators namely economic participation and opportunity, educational attainment, health and survival and political empowerment altogether comprising fourteen sub-indicators. Scores for

each of these sub-indicators range from 0 to 1, where 1 denotes achievement of parity. The Economic Participation and Opportunity sub-index estimates the participation gap, remuneration gap and advancement gap. The Educational Attainment sub-index captures the gap between women's and men's current access to education and gaps in literacy rate between male and female.

The Health and Survival sub-index provides an overview of the differences between women's and men's health through the use of two indicators; the sex ratio at birth that tries to capture the phenomenon of "missing women" prevalent in many countries with a strong son preference and the gap between women's and men's healthy life expectancy. The Political Empowerment sub-index measures the gap between men and women at the highest level of political decision-making through the ratio of women to men in ministerial positions and in parliamentary positions. In addition, the ratio of women to men in terms of years in executive office, either as Prime minister or President for the last 50 years is also included.

Objectives of the Study

This study is taken up with a view to compare the statuses of BRICS nations based on the scores of Global Gender Gap Report of 2018 and to recommend suitable suggestions to enable them to address gender disparity issues thus making them gender just nations with better Global Gender Gap (GGG) scores in the future.

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Methodology

The study is descriptive and analytical in nature. Secondary data sources from published reports, websites, books and blogs are used in the study.

Country-Wise Analysis of Gender Gaps

Among the BRICS nations, South Africa stands first with a fair Global Gender Gap Score of 0.755. It is positioned in the 19th place globally and third place among 33 Sub-Saharan African nations. The Russian Federation stands second among the BRICS nations with a GGG score of 0.701 occupying the 75th rank globally and 18th rank among 26 Eastern Europe and Central Asian countries. Brazil stands third with a score of 0.681 being ranked 95th globally. Among the 24 Latin American and the Caribbean nations, Brazil occupies only the 21st position. With a GGG score of 0.673, China stands fourth among the BRICS nations. It is ranked 103rd globally and 14th among 18 East Asian and Pacific countries. India, with a very low GGG score of 0.665, is ranked 108th globally and is ranked only fourth among seven South Asian nations.



Figure showing the Global Gender Gap Index (2018) of BRICS Countries

Brazil

Women in this country enjoy the same parental rights meant for men as regards marriage and divorce. Also, there is a provision for availing paternity leave by men. But the Brazilian law

does not have a mandate of equal pay for equal work. Also, there is no law that permits abortion to preserve a woman's physical health.

Economic Participation and Opportunity

With regard to economic participation and opportunity, Brazil is positioned at 92nd rank with a score of 0.645. Among the BRICS nations, Brazil stands third in this sub-index. The country has a score of 0.740 occupying only the 4th place among the BRICS nations. With a score of 0.489, the country is positioned in the 132nd place globally and only the last position among BRICS nations in terms of wage equality for similar work. The country is positioned at 93rd place globally and 4th place among BRICS nations with a score of 0.570 as regards estimated earned income.

In terms of number of women legislators, senior officials and managers, the country occupies 27th place globally and 2nd place among the BRICS nations with a score of 0.664. With regard to number of women professional and technical workers, the country is ranked first with a score of one. The gender gap has been closed completely only in this particular indicator whereas wide gender gaps exist in wage equality, estimated earned income and labour force participation. However, with regard to gender parity in legislators, senior officials and managers, the gender gap is narrower comparing other BRICS nations.

Educational Attainment

Brazil has fared excellently with regard to the educational attainment sub-index as it is ranked first globally and also among the BRICS nations with a score of one. It is the only country among BRICS to have absolute gender parity in all the indicators under this sub-index. The country has a uniform score of one in all the indicators of this sub-index; literacy rate, enrolment in primary education, secondary education and also in tertiary education. With respect to educational attainment of female population, it is found to be higher than the male population especially in the age group of 25-54 years.

Customers Satisfaction towards Housing Finance of Commercial Banks in Chennai City

P. Vimala

Abstract: Housing generally refers to the social problem of ensuring that members of society have a home in which to live, whether it is a house or some other kind of dwelling or shelter. Globalization of banking industry has spurred a new era of international expansion of financial markets. In India, the Banking Regulation Act was passed in the parliament in 1949 and the globalization of banking sector was open for private bankers and foreign bankers to banking industry.

The monopolies of public sector banks were broken. Little formal research appears to have been conducted which attempts to ascertain the various key concepts in housing finance. An attempt is made in this research paper to analyze the various factors which lead to customer's satisfaction and this sector is effective in their performance level and there is much more to be achieved.

Well framed questionnaires were circulated in different parts of Chennai city and the data from 100 respondents were selected from 5 banks of both public and private sectors are analyzed. Now present scenario, with the entry of commercial banks in the industry, the competition has become severe. The commercial banks are bringing the various strategies of performance to succeed the ultimate goal of customers' satisfaction and this sector is effective in their performance level and there is much more to be achieved.

Keywords : Awareness, Commercial Banks, Customer Satisfaction and Housing Finance.

I. INTRODUCTION

One of the significant aspects of budding housing finance business in India has been the increasing participation of the commercial banks. The product of choice for banks because of their attractive profitability, low risk weight, low delinquency history and the ease of processing of Housing loans. Mortgages explosive growth are recorded by All Banks which has vastly expanded the market. Housing loans have also provided further incentive to go for increased housing activity given in budgets.

The focus of this research is the study of housing finance in commercial banks including a comparison of schemes across banks with respect to their EMIs (Equated Monthly Installments) and on the basis of other terms and conditions, including value added services/additional incentives provided by the banks to home loan customers. In addition to the main objective, to ascertain public attitude towards housing finance has also been undertaken.

Banks have been especially keen on housing loans

grabbing a substantial market share in the mortgage business. Banks despite being a late entrant, have overtaken Housing Finance Companies in the Home Loan Market. Banks have entered almost all the segments in retail finance and are also gaining share from NBFC's (Non- Banking Finance Companies).

II. OBJECTIVES OF STUDY

- To examine that awareness level of the respondents with regard to housing finance in commercial banks.
- To study the factors influencing the respondents to prefer public or private sector commercial banks.
- To measure the opinions of the respondents regarding their satisfaction with various services rendered towards housing by commercial banks.
- To assess and critically evaluate the comparison of customer's satisfaction of commercial banks towards housing finance.
- To observe the problems of customers as well as suggestions for the development of housing finance activity.

A. Hypotheses

- Housing Finance in commercial banks creates more awareness in the society.
- Commercial Banks contributions to overall improvement in housing sector
- All private commercial banks provide equal amount of services and similar products.
- Customers are fully satisfied with the housing finance by commercial banks.
- There is no significance in social - economic factors, housing finance borrowers attitude towards private commercial bank's housing schemes.

III. METHODOLOGY

The present study is a analytical and empirical one which evaluates the public and private sector banks providing the services to their customers on the viewpoint of housing finance customers in Chennai, which form the primary sources. Structured questionnaires and well-balanced direct interview method have been used to collect data from primary and secondary sources.

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Customers Satisfaction Towards Housing Finance of Commercial Banks in Chennai City

IV. CUSTOMERS' SATISFACTION ON HOUSING LOAN

Comparison of banking sectors with respect to respondents' satisfaction

To test the significant difference between the banking sectors with respect to the satisfaction of respondents towards housing finance, independent samples t-test is applied to identify the significant difference between the banking sectors with respect to the satisfaction. The following null

hypotheses are framed:

H₀4: There is no relevant difference between the banking sectors with respect to the satisfaction towards;

- Loan process.
- Banking services.
- Expenses of loan.
- Convenient banking.
- Services of the banker.

Table shows the results of comparison of banking sectors with respect to respondent's satisfaction.

Table – 1: Comparison of banking sectors with respect to customers' satisfaction

Variables	Bank	No	Mean	S D	t-value
Customers' satisfaction towards loan process	Public sector	72	21.63	1.804	2.355* (p=.012)
	Private sector	28	20.91	1.868	
Customers' satisfaction towards Banking services	Public sector	72	38.38	2.612	2.470* (p=.011)
	Private sector	28	37.20	2.413	
Customers' satisfaction towards expenses of loan	Public sector	72	29.49	1.917	3.909** (p=.003)
	Private sector	28	28.87	2.355	
Customers' satisfaction regarding convenient banking	Public sector	72	29.29	1.981	3.171** (p=.009)
	Private sector	28	28.95	1.557	
Customers' satisfaction towards services of the banker	Public sector	72	57.58	5.208	3.187** (p=.008)
	Private sector	28	56.37	4.008	

*Significant at 5% level **Significant at 1% level

A. Customers' satisfaction towards loan process

The obtained 't' value is 2.355 and it is significant at 5% level. The value indicates that there is relevant difference between the banking sectors with respect to the satisfaction towards loan process on housing finance. Therefore, the formulated hypothesis is that "There is no relevant difference between the banking sectors with respect to the satisfaction towards loan process" is rejected.

Further, the mean table indicates that the customer's got housing finance in public sector banks have scored highest mean value of 21.63 and the lowest mean value was scored by the respondents got housing finance from private sector banks (20.91). This shows that, the respondents got housing finance in public sector banks are having better satisfaction towards loan process than the respondents got housing finance from private sector banks.

B. Customers' satisfaction towards banking services

The table 't' shows 2.470 and it is significant at 5% level. The value indicates that there is significant difference between the banking sectors with respect to the satisfaction towards banking services on housing finance. Therefore, the formulated hypothesis is that "There is no remarkable difference between the banking sectors with respect to the satisfaction towards banking services" is rejected.

Therefore, the mean table shows that the applicant's got housing finance in public sector banks have scored highest mean value of 38.38 and the lowest mean value was scored by

the respondents got housing finance in private sector banks (37.20). This shows that, the respondents got housing finance in public sector banks are having better satisfaction towards banking services than the respondents got housing finance in private sector banks.

C. Customers' satisfaction towards expenses of loan

The 't' value is 3.909 and it is significant at 1% level. The value indicates that there is significant difference between the banking sectors with respect to the satisfaction towards expenses of loan on housing finance. Therefore, the formulated hypothesis is that "There is no notable difference between the banking sectors with respect to the satisfaction towards expenses of loan" is rejected.

As well as, the mean table explains that the public got housing finance in public sector banks have scored highest mean value of 29.49 and the lowest mean value was scored by the respondents got housing finance from private sector banks (28.87). This shows that, the respondents got housing finance from public sector banks are more satisfied towards expenses of loan than the respondents got housing finance in private sector banks.

D. Customers' satisfaction towards convenient banking

The table value of 't' is 3.171 and it is significant at 1% level. The value indicates that there is significant difference between the banking sectors with respect to the satisfaction towards convenient banking

ASSESSING KEY FACTORS OF CRM MAINTENANCE FOR EFFECTIVE CRM IMPLEMENTATION IN THE INDIAN BANKING SECTOR

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ABSTRACT

A CRM is a sound business strategy for banks to help create brand value and identify and understand their customers' needs by providing targeted, timely and relevant information that can add value to their customers. It is a technology for managing all the organizational relationships and interactions with potential customers. CRM today has the ability to predict customer behavior, building value-added activities as well as brand images and adding value to customer support activities. The Customer Relationship Management in banks depends upon optimistic relationship between bank staffs and customers. CRM is not a unique phenomenon, but it is a combination of human factors, maintenance factors, technological factors and strategic management practices. Hence the present research encounters primarily with the maintenance factors responsible for successful CRM practices in private sector banks.

Several studies argued that the products and services offered by service sector banks are coupled with maintenance factors behind bank staffs and customers. Therefore it is an attempt to segment predominant maintenance factors for the success of CRM practices. This research depends upon primary data obtained from bank staff in different private sector banks in Chennai city. The convenient sampling method is found useful to obtain the responses through a structured questionnaire. The application of factor analysis by principal component method derived 5 predominant factors namely, Personalization, Building trust and Confidence, Understanding customer expectation, Empower customer service and Grievance redress. The study also emphasized the importance of CRM Maintenance for the best service of Banks and customer loyalty.

KeyWords: Personalization, Trust and Confidence, Customer expectation, Empowerment, Grievance redress.

INTRODUCTION

In the present scenario, Customer Relationship Management has become inevitable for growth and profitability of Banks. It is the strategy for building, managing and strengthening loyal and long-lasting customer relationships. Today, with the wide usage of electronic communication technologies, customer relationship management has undergone significant changes and it represents a system which includes all aspects of communication and interaction with customers. Banks must always keep in mind that they are not only offering and selling their products and services, but they are also offering their organization reputation in every relationship established with customers. That is why banking service providers have to make additional efforts to incorporate special values into their offer and relationships they establish with customers. The need of the hour is recognition to CRM as Organization wide strategy or planned sequence of activities to develop and nurture customer relationships.

REVIEW OF LITERATURE

In order to retain the customers and to acquire new business, CRM implementation is the first step in banks but the most crucial step is maintenance of CRM. It is observed that the maintenance of CRM through various factors like Personalization, Building trust and Confidence, Understanding customer expectation, Empower customer service and Grievance redressal.

S. Sudalaimuthu, J. Lilly, 2009) in their article titled “A Study On CRM Practices in Banks” have expressed their concern about the working environment of the banks. The banks have been concentrating on internal procedures, cost-profit benefit, merging, acquisition, and restructuring. The authors have analysed and suggested through their study that the banks have to equally concentrate on attracting potential customers, retain existing customers and also to attract back the lost customers. It becomes inevitable for the banks to take effective steps to bring back the old customers and change the perception of the banks and divert them towards banks. The study concluded that both bankers and customers approach on Customers Relationship Management need to be revamped so to enable the banks to adopt CRM as a tool to improve the efficacy of banks.

(Agariya, A K, Singh Prof., D,2012) The aim of this paper is to develop a reliable and valid CRM (Customer relationship management) scale specifically catering to Indian banking sector. The findings of this study validate the long held belief that CRM is a multidimensional construct and serves as a critical success factor for business performance. It provides a conceptually validated CRM scale catering to Indian banking sector, which can help the managers in implementing the CRM in an effective manner and also can be used as a tool to identify the major areas requiring attention

(Chuang, Chao Chao, Hu, Fu Ling, 2014) The research shows that CRM increases the capital value of a bank by better coordination between the departments of marketing and operations and helps to present service level as an outstanding differentiator from competitors. Through CRM, banks also establish closer relationships with customers and increase their profits.

(Kotarba, Marcin,2016) Growing levels of regulation force financial institutions to change their business models toward lower risk levels, higher capital adequacy, service quality, and more stable revenue pools. the banks are subject to pressure from accelerated technology development and social changes. These two factors influence the behavior of customers and induce changes in the customer relationship management (CRM). proposed strategic actions that need to be undertaken in order to prepare the financial services industry for managing customer relationships in the increasingly techno social environment

(Valmohammadi C,2017) in his research article titled “Customer relationship management: Innovation and performance” aimed to empirically test a framework which identifies the relationships between customer relationship management (CRM) practices, organizational performance and innovation capability of Iranian manufacturing firms. The results reveal that CRM practices have a positive and significant, though weak, effect on organizational performance and innovation capability of Iranian manufacturing organizations. Innovation improvement caused by CRM also results in better organizational performance. This will further identified that CRM maintenance is very important for all the financial institutions to implement the CRM strategies to convert ordinary customers into the loyal customers.

It is stated from the reviews that CRM helps companies automate and manage the entire lifecycle for customer sales, marketing, acquisition, maintenance, and exit. The customer-focused personnel has to maintain contact with customers and improve service.

LITERATURE GAP

After reviewing the national and international research work on crm in banks and other organizations, the researcher identified two predominant gaps namely,

- 1. No research work is done separately for CRM Maintenance factors
- 2. What is the relationship between CRM Maintenance factor and organizational profile of bank employees.

Those two research questions are ventured upon this paper.

OBJECTIVES OF THE STUDY

- To study the different CRM maintenance factors responsible for successful CRM implementation in commercial bank.
- To find the overall effectiveness of CRM Maintenance factor on the successful CRM implementation in Private sector banks.

Iq, Eq, Sq And Skill Development Are Not Balanced In Board Examination - A Research With Reference To Chennai City

R. Mary Geetham, G. JoicyLidwina

Abstract— A school should follow 'learning methodology' (like activity based learning, active learning methodology, etc.), the examination is built within the learning process, which means that there is no separate exam. Students do self-evaluation, projects, etc. while they are learning the content. Here examination is done on the basis of students' learning. Exams are necessary in schools to find out the real skills, talents and knowledge of the students. But practically this is not done therefore the researcher felt the need to conduct a study to formulate a question paper which measures and values the student's IQ, EQ, SQ and Skills Developed in the students and researcher wanted to identify the pros and cons of board examination, the understand the psychology of students and various challenges encountered in conducting the board exams. The researcher used SPSS package to analyse the questionnaire and used certain statistical tools such Frequency Analysis, ANOVA, Regression, Factor Analysis etc. to find out that board examination does not inculcate reasoning ability in the minds of the students neither it makes the students to learn with understanding, and it does not test their general knowledge. Board Examination at the same time with few negativity induces problem solving technique and develops social skills though verbal ability and speed of logical reasoning is not tested through questions. Therefore the researcher advises to revise the pattern of exam giving students a stress free environment, carrying general knowledge and logical ability.

Key words:- Examination, Intelligent Quotient, Emotional Quotient, Spiritual Quotient, Skill Development

I. INTRODUCTION

Examination is an assessment intended to measure a student's knowledge, skill, aptitude, physical fitness and classification in many other topics. Exams are necessary in schools to find out the real skills, talents and knowledge of the students. They get directed towards higher education after completing their examination from a particular grade. But in reality the board exams conducted by the Government does measure only IQ of the students. The factors of EQ SQ or any skill is not tested in board examination. Moreover there is a disparity between central board and state board pattern in conducting exam. CBSE board examination is more logical and research says that CBSE students clear competitive exams more than a state board students. NEET or any other GOVT competitive exam can be cited as an example. Therefore the researcher wanted to identify the pros and cons of board examination, to understand the psychology of students and various challenges encountered in conducting the board exams. The

researcher also focuses on conducting a de-stressed exam by giving an productive environment to the students.

II. NEED FOR THE STUDY

Today, our main focus in life is to get a good education and have a sound career to lead a happy and content life. Teachers need an objective basis for determining whether they have taught a specific section of the material properly. The only way to do this is to test the students' mastery of the material. If exam is conducted to assess the understanding of the student and his/her skill, there would be no stress at all. But actually this is not done therefore the researcher felt the need to conduct a study to formulate a question paper which measures and values the student's IQ, EQ, SQ and Skills Developed of the students.

III. STATEMENT OF THE PROBLEM

The word exam is used with children brings stress and fear in their minds. Examination nowadays has created an 'I' Vs 'You' kind of competition, which is unhealthy in the education system. 'Unhealthy competition' leads to stress and creates fear in the minds of children. The problem is that everyone wants their child to be called a genius and hence comparison starts. The school should play a major role in educating the parents on the child's individuality and pros and cons of comparison. Exam stress is a part of the education system but that stress should be positive. Students are expected to perform well in all kinds of exams throughout the year with no respite. It is not a good sign as it will create stress among students.

IV. RESEARCH GAP

Review from the available literature reveals that the number of research studies has been done on Examination, EQ factors IQ factors etc.,. This research work is a new perspective on finding the level of IQ, EQ and SQ applied in the board exam pattern. This study will analyse whether board examination is application oriented and improves a student's skill balancing all the quotient in an board examination.

V. OBJECTIVES OF THE STUDY

The objectives of the study are as follows

- To identify the pros and cons of board examination.
- To understand the psychology of students during board examination.

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Iq, Eq, Sq And Skill Development Are Not Balanced In Board Examination - A Research With Reference To Chennai City

- To analyze the various Challenges encountered in conducting the board exams.

VI. SCOPE OF THE STUDY

The study was concerned with in Chennai city.

VII. PROS OF BOARD EXAMINATION

- To know that the students learnt the concepts.
- It is an easiest way of evaluating the students.
- Students do combine studies which help them learn the essence of team-work and help develop communication skill.
- Enough opportunities to monitor and evaluate the teaching strategies.
- Examination plays a main role in molding the children's future.

VIII. CONS OF BOARD EXAMINATION

- ❖ It cannot measure the level of understanding of the students about the concepts.
- ❖ Examination nowadays has created an 'I' Vs 'You' kind of competition, which is unhealthy in the education system
- ❖ It motivates the students to do malpractices during the examination.
- ❖ It cannot be considered as complete evaluation of the students.
- ❖ It curtails the creativeness and thinking capacity of the students.
- ❖ It encourages rote learning.
- ❖ The word exam is used with children brings stress and fear in their minds.

The problems are as follows.

1. What are the pros and cons of board examination?
2. What are the various Green Brands available in the market?
3. What is the psychology of students during board examination?

IX. SAMPLE DESIGN

Non-random sampling method is adopted (i.e.) the respondents to my study are not selected at random. The sample size selected is 50.

X. DATA COLLECTION

Data can be divided into two (1) Primary data (2) Secondary data.

Method Of Collecting Secondary Data

Secondary data for this study was taken from research articles published in magazines, books, periodicals, newspaper etc.

Method Of Collecting Primary Data

There are various method of collecting data such as interview method, questionnaire method, preparing schedules, observation method etc .The researcher used questionnaire method to collect the data.

XI. ANALYSIS AND INTERPRETATION

The investigator used various statistical tools such etc to analyse the data.

XII. LIMITATION OF THE STUDY

There are few limitations of the study

1. Time available for the study is limited.
2. Data available is not sufficient to cover all aspect.
3. The area covered for the study is narrow.
4. In many institutions they are not willing to co-operate and provide the investigator with sufficient information.

XIII. SCOPE OF FURTHER STUDY

A study conducted to formulate the syllabus to include IQ, EQ SQ and Skill Development in the study material. A study conducted to identify the best teaching style to teach the study material which includes IQ, EQ SQ and Skill Development.

XIV. REVIEW OF LITERATURE

Bergin.G (2017) describes two types of methodologies:- teaching methodology and learning methodology. Further on the states the advantages and disadvantages of exams, if exam is conducted to assess the understanding of the student and his/her skill, there would be no stress at all.

Daniel Goleman (1995) explains about IQ and EQ, further explains how it enhanced ,measured, tested and its importance and its applications.

J Neurol Stroke (2014) identifies the five factors being tested are knowledge, quantitative reasoning, visual-spatial processing, working memory, and fluid reasoning .He explains that genes and environmental factors are also the factors influencing IQ .The researcher describes various tests to measure IQ and EQ.

Mark Ashton Smith,(2010) the researcher has stated that General Intelligence is based on five underlying IQ factors. They are crystallized intelligence, fluid intelligence, visual intelligence, processing speed, Qualitative intelligence Some of these factors are based on , 'acquired knowledge' through education, others are based on 'raw' thinking skills that we are usually not taught.

Francis Galton's (1905) the researcher has talked about IQ and EQ , importance ,application enhancement, pros and cons , measurement and testing of IQ and EQ.

Leafy Shrew (2009) the researcher has discussed about the environmental factors of IQ such as modern media, education, parenting, nurturing, etc.

Shana Lebowitz (2014) the researcher has explained about the factors of IQ, testing and measuring of IQ, alternatives of IQ test.

Marcel.Goldschmid (2016)the researcher has analyzed 7 critical factors of Emotional Quotient, they are Engagement and Motivation, Recruitment, Coaching, Relationship, Team Building etc.

Trends in Private Final Consumption Expenditure before and After Demonetization

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Abstract

Demonetization is a process of ceasing certain exiting denominated currencies from circulation. It is not a new process since it is already twice introduced in India before November 8, 2016. This time it aims to remove R.500 and Rs. 1000 rupees denominated currencies by introducing new Rs.500 and Rs. 2000 currencies. The present study aims to find out the impact of demonetization on Private Final Consumption Expenditure (PFCE) before and after demonetization. Because, private final consumption is the largest contributor to GDP and also an indicator of standard of living of individual in an economy at a particular period of time.

Key words: Demonetization, Private Final Consumption Expenditure, Impact.

Introduction

The aim of present demonetization according to then Finance Minister ArunJaitely is to move India from tax non components economy to tax components economy and to eliminate the black money. This demonetisation process also includes the aim of to curb the terror funding and promote digital transaction in India to bring into account all the monetary transactions. Demonetization was not a new process in India. It is already twice implemented in India. The demonetizations was implemented in 1946 to remove Rs.1000 and 10,000 denominated currency notes from circulation. And second time it was implemented in 1978 by then Indian Prime Minister Moraji Desai announced currency ban on Rs. 1000, Rs.5000 and Rs.10000 denominated currency notes. In those period the common people are not affected because of prevailed wage rate and price. But the present demonetizations that is removal of Rs.500 and Rs.1000 are closely associated with prevailed wage rate and price.

Statement of the Problem

Gross Domestic Product at market prices is the aggregates of consumption, investment and net exports. Among these components consumption sector is the largest contributor to GDP. The sudden process of removing the currencies denominated at Rs. 1000 and Rs.500 the circulation was created agitation in the society. These two are the highest denominated currencies received by all the sections of people as well as all the factors of production in the form of wages and salaries. In India about 81 percent of the population is working in informal sector (ILO, 2018:88). This is sector functioning under cash payment system. The unexpected process that is demonetization has affected the consumption sector. The consumption sector is the largest contributor to GDP in India. Therefore, this study aims to find out the trends in consumption sector before and after demonetization.

Review of Related Literature:

The following review of literature shows that both positive and negative impact of demonetization. Sandhya and Priyabrat (2017) in their study Impact of Demonetization on stock price movement in banking sector of India identified that general execution as far as Bankex is indicating huge effect but individual bank securities are not picturing such abnormal effects. Mohammad et al., (2019), in his work that the sectoral effect of demonetization on the economy: Evidence from early reaction of the Indian stock markets, identified that group affiliated firms with highest negative return both on the event days and during the window period. He concluded most of the banks are affected in the early days. The other sectors like pharma, paper and whole sale trading witnessed a windfall gain in the long run. Ashita and Ritu (2017), in their study of demonetization: Economic impact on different sectors in India found that agriculture, real estate, construction, manufacturing, financial, aviation, tourism and hospitality, telecom, health care and automobile are affected at the time of demonetization. In views of PranabSen India's First Chief Statistician stated that, the targeted growth is not possible because demonetization adversely affected the industrial sector and IT sector. Veerakumar (2017) in his study about the impact of demonetization on the public perception identified that there is a significant impact on the gender, age, occupation and annual income of the people due demonetization. Kaur (2017), in his study he analysed the impact of demonetization on the cashless payment system. The result shows that rising use of credit cards and debit cards, online payments and banking systems usage has been increased due to demonetization.



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Competitive hydrogen bonding influences of fluorophore- urea-adenine system in water: Photophysical and photochemical approaches

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ABSTRACT

Photophysical and photochemical investigation of photoinduced electron transfer (PET)-based acridinedione dye (ADR1) with urea in the presence of a nitrogenous base (adenine) were carried out in water. Urea suppresses the PET resulting in a fluorescence enhancement and the extent of binding is correlated and governed by the number of urea molecules surrounding the close vicinity of dye. On the contrary, adenine forms a true 1:2 complex with dye. Presence of adenine in dye-urea microenvironment results in the displacement of dye from the vicinity of urea molecules. The stability of dye-urea network in the presence of adenine reveals that the microenvironment of dye is governed and influenced by both urea and adenine. Introduction of adenine to dye-urea results in the formation of several hydrogen bonding assemblies that are competitive and influences the excited state characteristics of ADR1 dye. The micro assemblies comprise dye-urea (DU), dye-adenine (DA), urea-adenine (UA), urea-water (UW), urea-urea (UU), and adenine-water (AW) framework and the existence of several competitive hydrogen bonding results in a large variation in fluorescence properties of ADR1 dye. The presence of several assemblies also signifies that no confined phase selectively of DU or DA assemblies exist in any stoichiometric proportion in the aqueous phase. The binding constant, the variation in the fluorescence lifetime and its relative amplitude of DA in the presence of urea authenticate that the binding nature of dye-urea-adenine (DUA) is dependent on the several hydrogen bonding assemblies that coexist at any concentration. The extent of hydrogen bonding of DA is found to be entirely different from that of urea. Further, urea resulted in changes in the transient absorption peak of dye with a large variation in lifetime and shift of the transient absorption peaks. Fluorescence spectral techniques are used as an efficient tool in elucidating the binding nature of DU framework in the presence of non-fluorescent hydrogen-bonding solute like adenine.

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1. Introduction

The introduction of intramolecular charge transfer (ICT) and photo-induced electron transfer (PET)-based fluorophores with nitrogenous bases like adenine [1,2] and globular proteins (bovine serum albumin (BSA)) have been established by fluorescence spectral studies [3–6]. Among probe-biomolecules interaction, dye-BSA studies have garnered interest among photophysicists from early fifties, wherein significant breakthrough has been produced in different time periods [7–16]. In the literature regarding the interaction of DNA bases, several reports are confined to adenine with sulpha drugs including sulphanilamide, sulfamethoxazole, sulfamerazine, sulfamethazine [17,18], anti-inflammatory drugs [19], anti-depressants [20], and sulphonyl

derivatives [21], and to a lesser extent with extrinsic fluorophores (thiazolyazoresorcinol and thiazolyazocresol) [22].

Interestingly, in the absence and presence of denaturants like urea [23–27], studies involving nucleotides-fluorophore interaction are relatively lesser compared with that of proteins. The study of fluorescent probe with proteins or biomolecules is of utmost importance in pharmacology, biochemistry and in medicinal field of research. The specific non-covalent bonding interactions that comprise hydrogen bonding and hydrophobic interactions [28] are more significant in DNA and proteins. Fluorescence spectral techniques serve as a vital link in establishing and elucidating the structure and properties of probes with biomolecules in aqueous/buffered solutions. A significant edge over other analytical and spectroscopic techniques is that the steady-state and time-resolved absorption and fluorescence studies provide information about the probe located in a microheterogeneous environment containing several microdomains that possess hydrogen bonding,

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A study on biofuel produced by catalytic cracking of mustard and castor oil using porous H β and AlMCM-41 catalysts

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Fluorescence Spectral Studies on the Interaction of Alanine and Valine with Resorcinol-Based Acridinedione Dyes in Aqueous Solution: A Comparative Study with Glycine

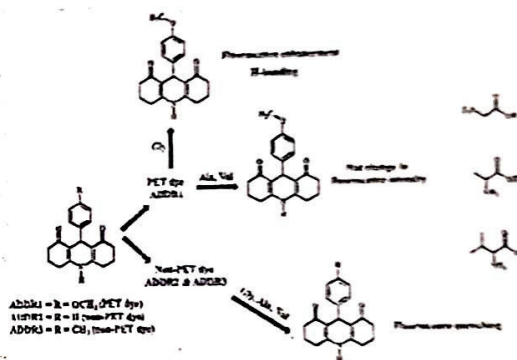
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Supporting Information

ABSTRACT: Photophysical studies were carried out for simple amino acids like alanine and valine with resorcinol-based aqueous acridinedione (ADDR) dyes. ADDR dyes exhibit interesting excited-state characteristics on altering the substituents at the 9th and 10th sites (Scheme 1). The longest-wavelength absorption maxima remain the same on adding the amino acids to the fluorophore, whereas the excited-state behavior varies significantly mostly based on the nature of the substituent at the 9th position. The absence of fluorescence enhancement was observed with addition of β -alanine, L-alanine, and L-valine to ADDR1 dye (photoinduced electron transfer, PET), whereas addition of glycine exhibits enhancement accompanied with a shift toward a longer-wavelength region. Interestingly, the addition of amino acids to non-PET dyes results in a fluorescence quenching accompanied with a larger shift toward the shorter-wavelength region. The properties of fluorophore and nonfluorophore dyes in the presence of alanine or valine are found to be entirely different from those of glycine. The interaction of alanine with ADDR dyes is predominantly through H-bonding, but the structural aspects of H-bonding interactions of alanine and water are completely different from those of glycine and water. The time-correlated single-photon counting method portrays the existence of fluorophore in two distinguishable microenvironments in the presence of amino acids. The fluorescence spectral technique used as a tool in elucidating the mode of interaction of dye with neutral amino acids in aqueous solution is illustrated in the present study.



INTRODUCTION

Amino acids are broadly classified into three groups, neutral, acidic, and basic, wherein neutral amino acids have a better solubility in water compared to other amino acids. Several studies on the H-bonding characteristics of neutral amino acids have been well established with respect to glycine and alanine. The H-bonding properties and the orientation of amino acids with a water molecule in the gaseous state largely differ from those in the aqueous phase. These amino acids exist in the neutral form (gaseous) and zwitterionic form in water. The amino acid possesses two functional groups involved in the H-bonding interaction, wherein it acts as a H-bond donor as well as an acceptor. In water, they exist as COO⁻ and NH₃⁺ possessing both electrostatic and H-bonding interactions. The orientation of water molecules surrounding amino acids depends upon the nature of the amino acid. Interestingly, the mode of H-bonding of alanine widely differs from that of glycine, which is significant in the field of organized molecular assemblies with water molecules. There are reports that postulate the nature of H-bonding, which is based on the number of water molecules surrounding glycine, alanine, or

valine. Even though the alkyl chain length increases by methyl substitution only, a large variation in the H-bonding arrangement is visualized.

There are several reports on the role of glycine–water H-bonding interactions, but the interaction of simple amino acids with fluorophores based on charge transfer (CT) and electron transfer (ET) is found to be very less confined to the field of photophysics.^{1–7} Glycine acts as a H-bond donor as well as an acceptor and further behaves like an excellent guest molecule with water, forming various types of H-bonding patterns. Our earlier report⁸ reveals that a nonfluorescent amino acid (glycine) interaction with photoinduced electron transfer (PET) and non-PET-based fluorophore in aqueous solution have established that the ground-state and excited-state characteristics of acridinedione dyes are largely influenced and governed by the H-bonding between amino acids and fluorophore.

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Photophysical Studies of Acridinedione Dyes With Amino Acids in Water

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Abstract

Photophysical studies of resorcinol based acridinedione (ADDR) dyes with a simple amino acid like glycine were carried out in water. Addition of glycine to photoinduced electron transfer (PET) based dye resulted in a fluorescence enhancement. Interestingly, addition of glycine to PET dye not only results in a fluorescence enhancement but a significant shift of the emission maximum towards the red region was observed. The fluorescence enhancement is attributed to the suppression of the PET process through space between the donor and the acceptor moiety of acridinedione dye ring structure. Both hydrogen bonding along with hydrophobic interactions influences the excited state properties of ADDR dyes in the presence of glycine are elucidated by fluorescence spectral techniques. The existence of dye in two different environments is established from Time resolved fluorescence lifetime studies. The addition of glycine to non-PET dye does not influence the excited state properties clearly reveals that the PET process is influenced by the presence of glycine in water.

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Keywords: Acridinedione dyes; amino acids; photoinduced electron transfer (PET) fluorescent enhancement; hydrogen bonding.

1. Introduction

Acridinedione dyes (resorcinol (ADDR) and dimedone (ADD) based) belong to the family of laser dyes [1] and have good lasing efficiency properties. These dyes are significantly important in the field of anion and cation sensors, in the field of bio medical research and novel excited state properties. [1-6]. Acridinedione dyes are considered as a potential dyes not only as sensors, but are widely used as an efficient probe to determine the interaction of dye with non-fluorescent water soluble solutes containing several hydrogen-bonding and hydrophobic moieties.

Acridinedione is a bifunctional molecule and acts as an electron donor or acceptor, and undergoes various interesting reactions in the excited state. This dye possess several advantages due to the nature of the substituting group in the 9th and 10th positions as shown in Scheme 1.

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Review Article

SATELLITE IMAGE REMOTE SENSING FOR IDENTIFYING AIRCRAFT USING SPIHT AND NSCT

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Abstract-

This paper proposes the application of various types of highlight extractors method to perceive the airplane utilizing the satellite picture. Acknowledgment of article (Aircraft) in a picture dependent on the mix of highlight extractors which contain non-subsampled contourlet change and SPIHT change notwithstanding the relationship on shape examination. Additionally, an article can be perceived with the assistance of surface or appearance includes through Scale-invariant component change SPIHT To legitimize the right measure of each element extractor, we perform per of the referenced changes to enter pictures, decisively. The pre-owned classifier right now Detect Fuzzy Clustering and the aftereffects of this test appear, that the correct acknowledgment pace of airplane right now, at the hour of utilizing bend, let change and all Contourlet coefficients are 100%. And the identifying of the aircraft using SPIHT and NSCT finalized images are processed in the Content-Based Image Retrieval method and the Aircraft is identified.

Keywords: SPIHT, Contourlet Transform (NSCT).

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INTRODUCTION

Airplane acknowledgment is visual expertise educated to military faculty and regular citizen helpers during the first world war they introduce in military aircraft. Air resistance and army insight are essential for airplane recognition.

Airplane acknowledgment, for the most part, relies upon learning the outer appearance of the airplane, both neighborly and unfriendly, well on the way to be experienced. Some methods are used as printed in the playing card like a game for easy understanding and also used as slide shows, outline graphs, etc.

Some countries like the UK, The ROC was framed like barrier notice association as regular folks prepared some airplane acknowledgment and worked fundamentally all things considered somewhere in the range of 1925-57. Airplane acknowledgment has made a great revolution when the first two world wars take place during flying fighting occurred a danger, more than 200 Zeppelin and 400 airplane strikes during World War I in London. At 1917 in Germany have begun utilizing some bombers like fixed-wing aircraft, quantity carrier assaults lessened quickly.

Edward Bailey Ashmore who in the position of Major General Also First World War pilot. He has been assigned in Belgium as an artillery division and advised to make an improved recognition for aircraft for discovery, correspondence, etc. The London air defense area in London zone was made to observed by the Metropolitan Observation Service in 1925 that observer corps made a prompted to observe shores of Kent and shores of Essex.

Some high-flying and the quick airplane was impractical to calculate for aircraft recognition at the start during when the British war department and also the British air ministry at the

start of the war. In the Observer Corps the spare time volunteers differ in between somewhere in the range of 1938 and 1939 they began building up the abilities and preparing materials to accomplish it, on an informal premise.

Nearby units started to gather as one and structure spotting clubs guest Harker clubs that in the long run joined at April 1941 as The ROC's Club had early arranged some airplane type something like silhouette cards for the German and unified sorts, generally this kind of this has been made from the following photos from The magazine that was purely for aircrafts and sometimes it is from augmenting silhouettes monetarily delivered from card sets in 1930s cigarette. Specialized proof-reader for Airplane, Peter Masefield, from the corps he is an individual from the Corps, ventured to every part of Britain giving talks, instructional courses, etc.

The corps club additionally created some magazine based on fortnightly, and Airplane Spotter has been made by the assistance from some Airplane 's printers, At the end appropriated to each unit in the Corps. Enormous divider banners were delivered that indicated each known sort of airplane. The chief observer from Watford Group's Delta 3 named C.H. Gibbs-Smith, and from Harker club 3 made a recognition from the wing shape of the aircraft, tail type, from engine design and fuselage shape the recognition named as the WEFT.

Acknowledgment rivalries were sorted out restrictedly, territorially, broadly during the beginning of World War II 30,000 volunteers from the Corps had prepared almost to perceive a wide range of the current airplane precisely. The informal Airplane Spotter related magazine has been later renamed into The Journal of the ROC Club before being received production, and by HMSO they renamed the journal

Energy Efficient Receiver Signal Strength Indicator Based Clustered Routing Algorithm for Wireless Sensor Network

R. Anandha Lakshmi, T. Sureshz, R. Maruti

Abstract: Robust and efficient algorithms for routing and other process for a wireless sensor network are under active development due to technological advancements on wireless transmission systems. Each of the sensor nodes in a wireless sensor network either transmits or forwards the data packets to the base station. The main objective of the majority of the work in the literature is to save the energy consumption efficiently. The cluster based routing mechanism helps to achieve low energy consumption within the network. The network organizes its nodes as a cluster and selects a particular node as cluster head to manage the transmission within and between clusters. The majority of the clustering approach selects the cluster head using a thresholding based approach. Nodes having energy level higher than the threshold are the candidates for the cluster head selection. In the proposed approach the nodes remaining energy and the sum of distance between individual nodes to the cluster head node is considered. Optimal cluster head selection will help to increase the overall life time of the network. The distance between the sensor nodes is estimated using RSSI (Received Signal Strength Indicator) and other parameters measured from the physical layer. Experiments are conducted with simulation environment created with the NS-2 simulator and efficiency of the approach is analyzed in detail.

Keywords: cluster based routing, RSSI (Received Signal Strength Indicator), NS-2 simulator, cluster head selection, thresholding.

I. INTRODUCTION

A Wireless Sensor Network (WSN) comprises of a set of sensor nodes either mobile or static in nature. The sensor nodes communicate among each other through a wireless communication link. Each sensor node is equipped with low processing power, limited memory, and bandwidth. These nodes sense the environment, collect the relevant data, and then forward them to the sink or base node. The communication between the sensor node and base station is trivial in the design of routing protocols for WSN. Majority of the routing approaches follow a hierarchical cluster based routing by which the sensor nodes are grouped together to form a cluster. The communication between the sensor node and base station is accomplished through a multi-hop routing approach by forwarding the data packets through the intermediate cluster heads. The design of the WSN routing protocols and other algorithms poses several challenges due to its resource constrained environment. One of the biggest

challenges of WSN is the efficient utilization of energy available in the sensor nodes. The data transmission from the sensor node to the base station does consume more energy if each node communicates with the base station through a single hop communication. Energy efficient communication strategy is to follow geographic location based routing which greatly differs from the hierarchical routing [1]. By this approach the location of each sensor node is modeled using mathematical model. The existing node location estimation schemes uses GPS devices to find the sensor nodes location but the approach is not energy efficient [2]. Some of the literatures have adopted RSSI based wireless sensor node localization schemes which are considered to be energy efficient when compared to the methods which uses modern sophisticated devices. When the mobile nodes are static in nature then the node localization scheme does not consume more power but when the nodes are mobile in nature then they consume more energy as the node location has to be tracked continuously. Experimentally the RSSI is observed to be inconsistent even in a constrained and controlled environment [3]. But the LQI can effectively describe the error rate and when RSSI is combined with LQI then the distance estimation will be more accurate [4]. This paper attempts to utilize the combination of RSSI and LQI techniques to measure the distance between the nodes and the hypothesis is verified experimentally through simulations.

II. RELATED WORKS

This section presents the review and analysis of various clustering approaches adopted in literature using RSSI. In [6] an improved node localization scheme is proposed which maintains low energy consumption in clustering phase is proposed. In [7] a cluster head selection mechanism is performed by calculating the distance between the sensor nodes joined in the cluster. The distance is estimated using the RSSI metric. The RSSI of each node to the sink node is used for cluster formation in wireless sensor network [8]. The problems prevailing in LEACH routing protocol including packet forwarding and cluster head node selection is resolved. A distance measurement algorithm based on hybrid filter and least squares dynamic estimation of environmental parameters is proposed for RSSI-based wireless sensor network localization in logarithmic normal distribution model [9]. In [10] with anchor node as reference node, the RSSI value is optimized by applying hybrid filter based on mean filter, median filter and Gaussian filter.

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III. PROBLEM STATEMENT

Let us consider a Wireless Sensor Network arranged in a two-dimensional area which is denoted as a graph $G(V, E)$. The set of sensor nodes are represented $V = \{V_1, V_2, \dots, V_n\}$. The transmission range is represented as R which fixes maximum distance between two communicating nodes. If the distance between the two is greater than R then one-hop or direct communication between them is not possible. It can also be inferred that if the distance between the two nodes are greater R then they are not neighboring nodes. The graph G denoting the network can be Euclidean in which all the nodes located within the two dimensional space has a coordinate $(x_i, y_i) \in R^2$. The idea is to estimate the location of the sensor nodes with respect to the position of the beacon or reference nodes using RSSI and the distance estimation mechanism.

IV. DISTANCE BASED CLUSTERING MECHANISM

The clustering approaches reviewed in the literature have many issues and challenges to be addressed. The clustering approach should be scalable in nature and should have less communication overhead. The proposed clustering mechanism using distance measure is explained in this section where in the distance between the sensor node and the sink node is estimated based on a beacon signal sent from the base station. The sensor node calculates the distance between the sink node and itself based on received signal strength and link quality. In general the range based approaches for estimation of distance relies on the time of arrival (TOA), angle of arrival (AOA), RSSI, and LQI metrics. Based on the propagation time of the transferred data packets the distance is estimated in when the TOA, AOA, and other similar techniques are used. In the case of AOA additional antennas are used to find the direction of arrival. The proposed method adopts a combination of RSSI and LQI metrics for distance estimation for improved accuracy when compared to only RSSI based distance estimation. The RSSI is a better link quality estimator and LQI can be predicted based on a pre-trained machine learning model. The use of LQI increases the likelihood of accurate distance estimation. Initially the set of possible distance and the expected power level are identified. Then using LQI values the identified set is filtered. When the value of LQI is high then the likelihood of accurate estimation of distance is higher [5].

Next the cluster heads are selected based on the following parameters remaining energy in the node, centrality of the node, and sum of distance between the candidate node and its n -neighboring nodes. The residual or remaining energy in the node is considered as the node will be a part of inter and intra cluster communication when it becomes a cluster head. The average sum of distance between the candidate node and its n -neighbors describes its proximity to the neighboring nodes. The centrality of the nodes is considered since it may help to select CH with low energy consumption during aggregation and forwarding of data packets.

NodeCentrality

$$= \frac{\sqrt{\frac{\sum_{i \in \{1,2,\dots,n\}} d^2(i,j)}{n}}}{A} \quad (1)$$

Where A is the area of the network; n denotes the number of neighbors considered; and $d(i,j)$ is the distance between the candidate node and the neighboring node. Based on the above mentioned parameters the final list of CHs is found using a decision rule. The sensor nodes join the cluster based on the nearness to the CHs. When the distance between a sensor and two different cluster heads are same the node joins the cluster from which the advertisement message came early. The cluster heads collect the data from the sensor nodes and forwards to the sink through multi-hop approach.

In the proposed clustering approach, the cluster heads will not be changed frequently. This approach helps to reduce the energy expenditure in the network. The clustering process is initiated invoked when the distance between the sensors and their respective cluster head goes above a threshold level. In a cluster-based approach the head node shall cater only to a limited set of sensor nodes (threshold denoted as ' δ' ').

This limitation is due to the fact to ensure easy access of transmission channel instead of sensor nodes waiting longer time to transmit their sensed information to their respective head node. An optimal value of the degree of each cluster head helps to achieve better throughput. If the node lies within a certain transmission range then the battery power can be effectively used as only less power is consumed when a sensor needs to forward its data to cluster head. The cluster head spends more power as it sends or forwards data packets to the base station.

The load of a head node depends rely on the sensor nodes and volume of data sent by the sensor nodes lying within the cluster. The cluster head also relays the packets from various other clusters to the base station. Perfect load balancing within the network cannot be achieved as the sensor nodes move frequently within the network region. The Load-Balancing-Factor (LBF) helps to estimate the level of data load distribution within the network. The cluster head node's load will be expressed using the density in the cluster and the variance of the node density will represent the distribution of the load. The load factor can be taken as the reciprocal of the variance of the density.

$$LBF = \frac{n_c}{\sum_i (x_i - \mu)^2} \quad (2)$$

where n_c is the count of cluster heads, x_i is the density of cluster i , and $\mu = (N - n_c) / n_c$, (N being the density of nodes in the system) is the average count of neighbors of a cluster head. When the load is evenly distributed within the network then the value of LBF will be higher and it will be infinite if the load is perfectly balanced [11].

Node Localization in Wireless Sensor Networks Using Multi-output Random Forest Regression



K. Madhumathi and T. Suresh

Abstract More advanced developments have been made in the field of wireless communications, and it has further accelerated the growth of compact and low power-consuming wireless sensor nodes. During communication, each source node estimates the shortest path to the destination node by using the location information. Location information also helps in securing the network in the prevention of intruders. Previously available sensor node localization methods in the literature such as radio signals, time of arrival (ToA), and time difference of arrival (TDoA) suffers from various drawbacks. Also, the usage of sophisticated devices like GPS to sense the location of the node increases the deployment cost and in parallel, the energy consumption is also increased. This paper aims at developing a model to predict the future location of a dynamic sensor node. The linear model is built using the historical location information of the respective node. The trained model is capable of predicting the X - and Y -coordinates of a node accurately. For each of the node, a separate model is built and their future locations are predicted. If a node has data packets to transmit to a sink node, it obtains the present and next location of the sink node from the base node.

Keywords Node localization · Linear regression · Time of Arrival · Time difference of arrival · Random forest regression

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1 Introduction

A wireless sensor network is composed of numerous homogeneous or heterogeneous nodes distributed spatially over a geographical region. The role of WSN in our daily life ranges from home automation systems to healthcare applications. The advancements in the area of microelectromechanical systems (MEMS), wireless transmission technology are the major cause for the advancements in the area of smart cities and smart vehicles. Based on the problem-specific requirements, the sensor nodes can be deployed either in deterministic or random fashion. The functioning of a node in WSN can be categorized into following stages, namely acquisition, operation, and communicating the acquired data. The various stages in the process of communication in WSN are shown in Fig. 1. Each of the sensors captures the spatiotemporal information from the environment and forwards the captured information to a gateway node or a cluster head node (if hierarchical clustering is adopted). These gateway or cluster head nodes again forward the information to the base station. The processing of the acquired information will be done in the base station to perform any of the following tasks such as fusion, location tracking. Location tracking helps in providing location-based services, network optimization, and environment characterization.

Wireless sensor networks are generally second hand to measure physical phenomena of environment, and in many of the applications, the sensed values are tagged with geo-spatial data, i.e., both time stamp and the geo-location of the sensor. The WSNs can be used in many areas where each sensing node receives the information from a certain location and transmits it to a base or control station. It is an essential task to find the location from where the sensors have gathered the respective information. Researches have contributed many node localization methods, and almost all of them require more computing and other resources. Due to advancements in GPS technology, localization has been made simple and due to which other approaches have become obsolete. The low-cost GPS receivers used in smartphones have high error in the location estimation. The price of the more advanced GPS devices ranges hundreds of dollars, and they consume nearly 50 mW of energy and find the location with an error of +1 m or -1 m if the weather is clear. This high cost and high-power requirement do not suit many WSN applications [1].

In literatures, many algorithms have been developed for node localization used to solve multiple problems in various domains. In general, hybrid approaches for node localization exhibit more reliable and accurate results [2]. The other approaches

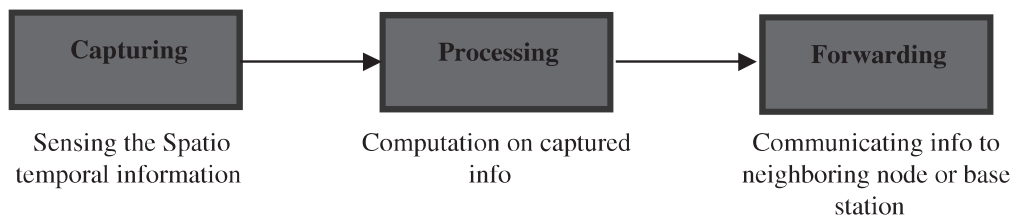


Fig. 1 Process flow in wireless sensor network

Localization of Mobile Wireless Sensor Node Using Randomized Feature Sample of Estimated RSSI Value

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Abstract--- A wireless sensor network consists of both static and mobile sensor nodes which constantly changes their position within the network and sends signal to the stationary nodes. In this type of network estimation of the nodes location becomes essential for providing a better Quality-of-Service (QoS) in the network. An optimal routing mechanism requires the location of nodes to be known to establish a reliable routing path between the mobile and static nodes. This paper explores a node localization mechanism based on the signal strength of packets received in the stationary nodes. The Received Signal Strength Indicator (RSSI) estimation is based on the okumura-hata model the location of the mobile nodes is approximated using a Support Vector Regression algorithm. The sequence of estimated RSSI values are transformed in to randomized feature space of low dimension which reduces the computational efforts required to train a regression model with a non-linear input data. The low dimensional randomized features are then used to train a Support Vector regression model with linear kernel and then Root Mean Square Error was analyzed to measure the performance of the model.

Keywords--- Quality-of Service, Node Localization, Received Signal Strength Indicator, Okumura-hata Model, Support Vector Regression, Root Mean Square Error.

I. Introduction

The sensor nodes can be mobile in a Wireless Sensor Network (WSN) [1] and the research on WSN with such nodes is growing rapidly. WSN with mobile nodes are more versatile in nature when compared to the static networks. These networks can be deployed in scenarios where there is rapid change in the topology of the network. These networks also help us to monitor the atmospheric conditions even at extreme situations. The mobile nodes are equipped with a transceiver, a micro-controller which can detect light, pressure, temperature, and other atmospheric conditions. The main constraint in the network operations is battery power and the energy should be utilized efficiently. It requires low complex routing algorithms and the shared medium makes the need for sophisticated medium access control schemes. The topology of the networks changes based on the mobility of the nodes. The sink or the base station connected with the mobile nodes using multi-hop paths is not stable.

In current utilization of WSN in many of the applications there is no defined standards exclusive for mobile WSN and hence many of the standard protocols of MANET are used which includes Greedy Perimeter Stateless Routing (GPSR), Ad hoc On Demand Distance Vector Routing (AODV), and Associativity Based Routing (ABR).

Protocols of MANET are used for WSN with mobile nodes as they are found to be more suitable for varying topology in the later type of networks [2].The dynamic position of the mobile nodes decides the topology of the network which decides the routing path for each data packet that has to be sent from the source to the destination node.

The essential functionalities required for managing a WSN is available within the routing protocols developed for them but the challenge is to manage the frequent topological changes in the network. But the MANET protocols which are designed for mobile nodes to have two-way communication can be used within WSN with mobile nodes where communication will be from sensor nodes to the sink node [3].

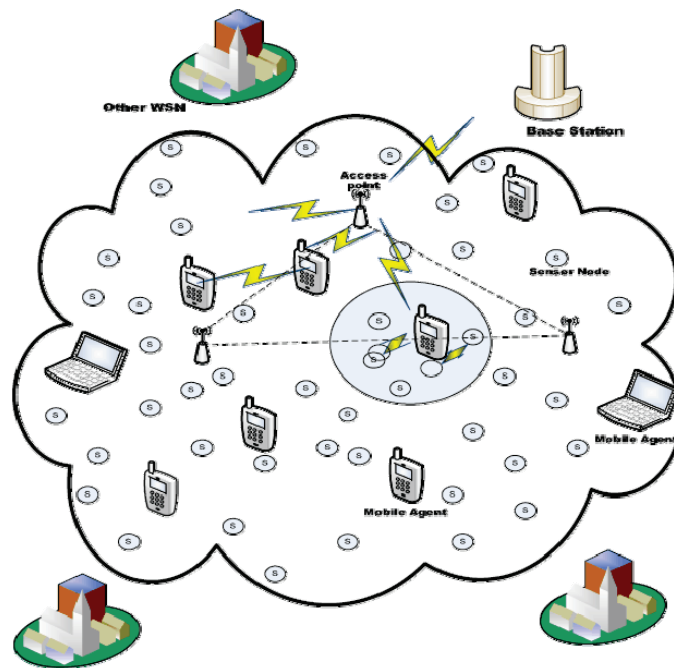


Fig. 1: Schematic View of WSN with Mobile Nodes [4]

The sensed values are binded with timestamp and the geo-location of the sensor before forwarding them to the sink node. The location of the sensor nodes are to be estimated accurately obeying the constraints including limited battery power. The localization estimation algorithm needs not only to be accurate but faster and must be able to detect the location of multiple moving nodes in real time without much delay. Some of the node localization schemes might be suitable networks deployed in indoor and some other may be suitable for outdoor scenarios. There is no common strategy for estimating the location of nodes in different scenarios and environment. GPS based localization mechanism can be accurate but they cannot be used within a power limited network. WSN localization schemes can be defined as range free or range based approaches. Majority of the range free techniques depends upon the radio connections and they map the network topology to the physical co-ordinates. The range free methods are simple and consume low cost and one of the range free methods was developed in [5]. The range free methods at time s prone error due to variation in the communication range and they rely on the environment especially on the type of antennas used for communication, channel fading, and non-line of conditions. The range based localization methods estimates the range with respect to the communication range using a binary bit representation where 1 denotes within range and 0 denotes out of range. Most of the localization schemes do not require any infrastructure other than the sensor nodes. Few of the approaches utilize the location of known nodes termed as anchor nodes for estimating the location of the other nodes. The location of the unknown nodes are determined relatively to the another node. The Fig.2 represents the category of localization algorithms that works by transforming estimated range into coordinates.

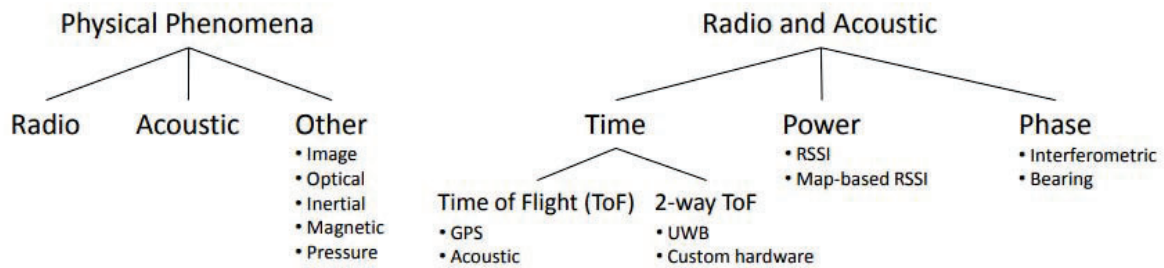


Fig. 2: Spectrum of Range based Localization algorithms