The Mannar Scroll

A Multi Disciplinary Peer Reviewed
International Biannual Research Journal

MANNAR THIRUMALAI NAICKER COLLEGE

(Re-Accredited with 'A' Grade by NAAC)

Pasumalai, Madurai – 625 004

The Mannar Scroll

A Multidisciplinary Peer Reviewed International Biannual Research Journal

Mannar Thirumalai Naicker College
(Re-Accredited with 'A' Grade by NAAC)
Pasumalai, Madurai – 625 004

A Message ....

It is with great pride that we present to you the first issue of *The Mannar Scroll*- A Multidisciplinary Peer Reviewed International Biannual Research Journal of Mannar Thirumalai Naicker College, Madurai. The Journal is an intellectual enterprise for the advancement of knowledge and application in the fields of humanities, science and technology, commerce and business administration.

The aim of this journal is to publish original research papers which contribute to "fresh glow of thought" in emerging areas of research in multidisciplinary mode. It is a small step towards that giant leap. There was an overwhelming response from scholars and teachers of colleges, universities in India and abroad. The referees had a tough time gleaning the best for the first issue. Finally we selected 34 papers from varied disciplines such as Tamil, English, Commerce, Business Administration, Computer Science, Botany, Mathematics, Physics and Chemistry. The editorial team will stretch "its arms towards perfection". We appeal that the journal be read and reviewed and feedback given for furtherance.

We thank the Chief Editor, our Principal Dr. S. Nehru and the Managing Editor, R.Raja Govindasamy, Director (SF) whose love and persistence have paid well in bringing out this journal. We are also grateful to the College Management for their encouragement and financial support in the release of this first ever research journal in the annals of Mannar Thirumalai Naicker College.

Editorial Board

ADVISORY BOARD

CONTENTS

WHICH APPROACH MATTERS FOR QUALITY TEACHING: TOP-DOWN OR BOTTOM-UP?

Dr J. John Sekar, M.A., M. Phil., PGDTE (CIEFL), PGDHE (IGNOU), PGDCE (UH), PH.D.,
Head & Associate Professor, Research Department of English
Dean, Academic Policies & Administration, The American College

Introduction

Quality teaching becomes everybody's concern when sustained growth and diversification of higher education system is critically viewed. Teachers as well as administrators are responsible to provide quality teaching so that quality graduates can be assured for the economic development of the country in the highly competitive and complex global world. Higher education in any country has its own social dimension and function and it cannot be purpose-free and context-free. At the same time, it cannot escape public assessments and international comparisons and in this context benchmarking assumes relevance and importance. Institutions should therefore evolve their evaluation mechanisms to identify and promote good quality teaching practices. These practices can emerge either from administrators or from teachers or sometimes from both. The Internal Quality Assurance Cell (IQAC) is a covetous role of maintaining a respectable, equidistance between teachers and administrators even though it is often perceived to be a management's manipulative tool. It doesn't matter if is closer to either one of them as far as its role is expressly proactive in ensuring quality teaching. It should work with two levels: teachers' and administrators' but its uncompromising goal is to ensure quality teaching so that quality graduates can become a national asset to the extent that they contribute their mite to the economic development of the country and the world.

Institutional Autonomy

Institutions may have affiliation relationships with the parent university because it enjoys the degree-awarding status and with University Grants Commission (UGC) or All India Council for a Technical Education (AICTE) because they are constitutionally recognised regulatory authorities, but they should enjoy academic autonomy. The Indian affiliating system is afflicting higher education cancerously in the country by treating colleges and other higher educational institutes as coaching centres. Academic autonomy is imperative for discussion, initiation, and implementation of measures to ensure quality teaching. Any external prescription or imposition on what

should be done or how it should be done robs teachers of their creative potentials, academic self-esteem, and self-worth. Academic autonomy is foundational for quality teaching. IQACs in colleges should first sensitize teachers and institutions on this basic, foundational structure and without which teachers will alienate themselves from what they are doing in the class. Affiliating system has benumbed the academic sensibilities of hundreds and thousands of teachers who minds have been educationally colonised to the extent to which decolonisation appears a remote possibility.

Academic Autonomy and Quality Teaching

Academic autonomy is therefore closely linked with quality teaching. It is perceived to have six elements:

1. designing programmes
2. Implementing programmes
3. Assessing the outcomes of the programmes
4. Self-assessment or appraisal
5. Teacher recruitment, and
6. Transparency in administration at all levels.

In this context, teachers' role is larger than that of the administration, but the latter's role determines that of the former. Hence, there must be a symbiotic relationship between the two and not confrontational or conflicting approaches in isolation. It will not serve the intended purpose of delivering quality teaching. 80% of higher education students belong to colleges where a three-tier structure is seen: undergraduate (majority), graduate (minority), and doctorate (minuscule minority). Teachers' strategies vary according to the tier system from knowledge sharing to facilitating knowledge discovery to knowledge production. At the same time, skill appears to belong to all the three tiers. It is because acquiring competencies (proven abilities) is different from capabilities (unproven potentials/skills) to be applied in unfamiliar and unknown situations and contexts later at work and in life. Hence, quality teaching can be assessable long after teaching has been done.

Quality Teaching Initiatives

Initiatives need to be taken both by teachers and the administration. Though they don't necessarily form any typology, the following are some of the initiatives that are imperative for quality teaching:

1. Projects must be designed to develop quality culture at the institution
2. Institutional policy on theoretical framework for the development of micro-level initiatives like the impact of the policy on teaching

3. Specific support at the institutional or/and department level to quality teaching like the creation of a dedicated body

4. Developing internal quality assurance system to evaluate and improve teaching quality

5. Designing policies at programme level in terms of designing and implementing new programmes and revisiting and renewing the existing ones

6. Evaluation of programme content, structure, teaching delivery, and assessment through student feedback with a structured questionnaire

7. Improving the professional aspects of teaching by designing pedagogical strategies, new pedagogical tools, and specific incentives for teachers

8. Improving quality teaching through ICT, student-teacher relations, or other learning environment

9. Ensuring continuous professional development (CPD) by organising teaching workshops to new teachers periodically, or optionally, or mandatorily

10. Measures to improve student knowledge of education paths, and placement/internship opportunities through specific services such as career guidance and advice

Quality Assurance for Quality Teaching

The IQAC's main catalyst role is to create mechanisms for identification of the initiatives. It can create motivational statements and propose experimental quality assurance schemes. It should also provide the administration with a methodology for framing the initiatives. However, there are critics who maintain that the IQACs and external agencies do not have the required tools to define and measure the quality of teaching. They claim that both internal and external agencies have only a scattered vision to the extent that the learning process cannot be assessed since it involves several determinants, such as teachers' attitude in the class, their skills, students' learning experience, and teacher-student relationships. There are some who claim that quality teaching relies on a complex web of factors whose assessment may give rise to subjective judgments. Its covetous role is to create awareness among teachers of quality teaching. Research profile of teachers can guarantee quality teacher as it is a pedagogical principle that teachers are also knowledge-producers and not simply knowledge-providers. Hence, institutions should be committed to providing opportunities to faculty members to become research-intensive.

Reasons for Institutional Engagement in Quality Teaching

Institutions are guided by their goals that are reformulated into vision and mission statements. The first and chief means for realisation of the same in concrete, tangible

terms is quality teaching and therefore quality teaching is not a choice but a compulsion. As objectives and goals change over time due to the maturity of the institution, there will be corresponding changes in perceptions of quality teaching.

1. Quality teaching depends upon the alignment between teachers' profiles and educational needs of the programmes.
2. Quality teaching leaves its indelible impact on student performance.
3. Teachers become excellent by their quality teaching, their progress, and teaching skills.
4. Quality teaching is a vehicle for national and international attention and recognition.
5. Quality teaching enables the department and the institution to become research-intensive. Conversely, research-intensive departments need to pay for quality teaching.
6. The nature of certain programmes requires quality teaching with a view to competing with institutions in its immediate neighbourhood.
7. Quality teaching does not mean a sum of different curricula, but calls upon teachers to use new methods on a regular basis, collaborative work, and non-conventional student assessments.
8. Quality teaching is expected from job markets because it could respond to the unpredictable needs of society. Students therefore demand quality teaching.
9. Quality teaching facilitates individuals to unlearn and re-learnt skills lifelong.
10. Institutional orientation and core values are translated into quality teaching.
11. Quality teaching is equivalent to distinctive feature of the quality of the institution.

Practice-based Education and Quality Teaching

A culture of empowering students should be initiated by the IQAC because they are a driver for quality teaching. They should play an active role and therefore they should serve on audit boards and raise concerns about teaching, learning environments, quality of teaching content, and teacher attitude. Quality teaching should ensure competence-based education. Students and alumni can be invited to benchmark learning conditions, teacher attitudes, pedagogy, and support. Lack of quality teaching may undermine the reputation of institutions or departments. Institutions should play an active role in providing practice-based education that can guarantee research potentials and career opportunities.

Mode of Institutional Support in Fostering Quality Teaching

Institutions ought to feel the need for initiating an institutional policy to support quality teaching thought it can be difficult. Policy making on quality teaching should be preceded by examining teachers' experience. The following modes can be tried:

1. **Iterative Approach**

    Institutions should facilitate the faculty to feel the added value of embarking on quest for quality teaching. It may be a lengthy and non-linear process. For instance, activities can be organized to improve teacher proficiency in using new equipment or adapting pedagogy to use the new tools. Faculty should feel comfortable with instruments which they had never used. Repetitive activities should consolidate the principle that teaching could and should be improved. Teachers should feel that their awareness is raised because their specific needs are met.

2. **Evolving Institutional Policy**

    After discussions and experiments at the department level, the institution should be keen to evolve a consistent policy to serve society as a whole. It should financially support innovative pedagogy. Teachers should be convinced for external accreditation processes through organizing periodic colloquia on the latest developments in the higher educational world. Speakers could be invited from outstanding institutions from other countries. Quality teaching support should be customised at either programme or discipline level.

3. **Project Management**

    Awareness on quality teaching can be tried through the philosophy and practicalities of what is called project management. Management and financial support is crucial but positions be assigned to skilled people. Decisions and initiatives may sometimes come from the top level, but the project should be carried out only at the faculty and student level. The concept of quality teaching should ultimately be publicised because teachers are no longer happy amateurs but professional practitioners.

4. **Internal Quality Assurance Cell**

    The IQAC is one of the pillars, if not the only pillar, of quality teaching and research. It should first accredit institutional programmes and departments. It will raise awareness of programme heads to quality teaching to the extent that it should be an item on agenda in their regular department meetings. It should encourage departments for constant improvement and regular evaluation for feedback. Though the IQAC may find its catalyst role difficult and controversial, its attempts will eventually have an impact on teachers' performance and students' learning conditions. It should not shy away from its responsibility to ensure the standards and continuous improvement of the definition of quality teaching policy, quality evaluation of teachers, services and resources, learning advice and support, and programme outcomes.

5. Teachers' Creativity

Drafting the institutional policy on quality teaching does not mean that it can promote heavy-handed top-down initiatives alone. Teachers at the department level should enjoy absolute academic autonomy for operations for quality teaching and suggest improvements. The only caveat is that they should ensure that their innovations meet the requirements of the institutional objectives. Institutions should benefit a strong identity and culture that encourages holistic thinking about teaching. Teachers should enjoy autonomy for collaboration with students and staff. Besides, quality teaching is linked with learning outcomes. However, teachers should remember that they can improve their instructional skills through teaching processes.

6. Innovative Attempts to Support Teaching and Learning

Innovation is possible only when faculty members do not experience any kind of fear psychosis toward administration and bureaucracy. Critical and creative thinking plays a critical role in any innovative attempts to support teaching and learning. Quality teaching support stems from an examination of what learners should gain and what kind of courses can provide them with expected skills. Consequently, teaching may assist learners in achieving the goals. Institutions then offer support and cooperation to teachers for relevant, effective teaching. Along with the institution, faculty members must be able to define the learning outcomes and skills required for graduation. Academic and administrative bodies should extend support to teachings and not suffocate their spirit to innovation and experimentation. Institutions must facilitate teachers in terms of reducing teaching work in class so as to save time for reflection and research on quality teaching. For instance, some of them can participate in a working group or a steering committee. Proposals for innovation shall come up from teachers themselves. No imposition works!

7. Balance between Academic Freedom and Quality Teaching

Institutions may be committed to quality teaching, but teachers may show reluctance to change programme delivery and their ways of teaching. In this context, institutional policy on quality teaching should not wiled power to 'coerce' teachers. Instead, it must find out some kind of balance between academic freedom and quality teaching policy. For instance, it can offer opportunities for the faculty to undergo a peer review which is mandatory for lecturing staff. Teachers can select their own peer reviewers for assessment and evaluation. This kind of initiative will definitely promote a quality culture and will strengthen collaborative work and ambience. Institutions must be prepared to face stiff resistance at the initial stage since resistance to any change is not only natural but also human. They can first

encourage teacher participation to win minimum acceptance for development of quality teaching support. Sometimes, teachers who do not show enthusiasm may consider any such attempts as interference with their mission. However, institutions should understand that such initial phases are a passing phenomenon.

8. Catch them Young

Teacher quality is closely linked to recruitment. Young teachers are going to be them in teaching profession for a long time and therefore they can make a difference. Novice teacher aspirants can be given enough opportunities at interviews to demonstrate their teaching requirements. They may fall under four categories:

i. quality teaching and methodological work like content of teaching activities and participation in methodological activities (preparation of education programmes, educational materials, curriculum planning and renewal)

ii. quality of research activities like preparation of manuals, articles, reports, and application of new pedagogical practices and exploitation of ICT as support to students

iii. development of academic qualifications such as winning fellowships and scholarships, participation in conferences

iv. ability to set questions and prepare rubrics, assessment and evaluation. and ranking

Students' Role vs. Quality Teaching

Students are expected to play an active role in defining the concept of quality teaching for them. Their participation in programme evaluation ensures the success of quality teaching initiatives. Their feedback in fact can be a starting point to enhance the quality of the programmes. They can bring new ideas from different angles, and teachers should not construe that it amounts to a loss of academic power. Institutions and faculty may regret low student commitment, but it is their responsibility to raise their awareness and encourage them to participate in discussions in advisory and decision-making bodies. Students may not be aware of the potential impact of their opinions, but teachers should make it clear to them that they depend on their feedback for measures to enhance quality teaching initiatives. They can start with the quality of learning outcomes and of their learning environment so that they may not feel uncomfortable to directly involve in suggesting anything to teachers.

Institutional Leadership

Any serious contemplation of quality teaching policy at institutional level requires dedication and commitment. The institution should create the tempo and set the pace

for reforms. It all depends on continuous and identifiable leadership at the institutional level. Institutional leadership can make or mar. It initiates and sustains all measure to ensure quality teaching. It facilitates discussions with and within departments. It should ensure nothing short of democratic spirit and individual autonomy for teachers. It should believe in bottom-up approach to quality teaching. It assigns clear roles for every faculty member who may hold additional responsibilities and they shall not undermine the honesty and integrity of others. Collaborative responsibility is the prevailing way to proceed. Institutions with a strong quality culture are likely to perform better in quality teaching.

Conclusions

Teachers own the ownership of quality teaching and therefore a bottom-up approach is ideal and desirable for enhancing quality teaching initiatives. Teachers must feel that they are answerable and responsible to students in terms of their learning outcomes and learning environment. However, there is a symbiotic relationship between the institution, the faculty, and students when any innovation is considered. Academic autonomy is a prelude to quality teaching. The IQAC has a covetous role to play as far as sensitizing teachers and the institution on the need for quality teaching is concerned. All these three stakeholders must be equally committed to quality teaching and learning. Dedicated service of the faculty is not a matter of compromise or dilution. Continuous professional development is a must for every faculty members irrespective of age and experience since knowledge and skills are outdated within a span of six years. Teachers therefore target teaching students how they can teach themselves lifelong. Successful teachers and learners are lifelong learners. Once a teacher, always a student; once a learner, always a learner!

PATRIARCHAL TERRORISM[1]: BRIDE PRICE AND GENDER VIOLENCE IN THE SHORT STORIES OF SWAZI WOMEN WRITERS

S. Jessie Furvin
Department of African Languages and Literature,
University of Swaziland, Kwaluseni Campus, Swaziland

Abstract

Gender violence is quite rampant in Swaziland, a land-locked country in the southern African region, which shares its borders with South Africa and Mozambique. In the polygamous Swazi society, women are treated as second-class citizens. The payment of bride price (Lobola) is part of Swazi culture which is one of the reasons that justifies domestic violence against women. This custom objectifies a woman and makes a man to feel that he owns the woman for whom he has paid the bride price. This custom tightens the shackles around a woman's feet because after the husband's death, she becomes the property of the man's family. In some instances, a woman marries her deceased boyfriend, so that she could officially become part of the deceased's family. In this case, the lobola is paid by the deceased man's family.Even though, it is said that this custom originated as a token of appreciation accorded to the bride's family for raising a 'virtuous' woman, it caters to the unnatural materialistic value placed on a woman's head by patriarchy. This paper purports to analyse the short stories of Lucy Dlamini and Sarah Mkhonza, two Swazi women writers who portray women in Swazi society in conjunction with a custom that unleashes "patriarchal terrorism."

Key words: *Swazi Literature; bride price;Lobola; Patriarchy; African Literature; gender violence*

Women's writing in Swaziland is a very recent phenomena and it still has a long way to go. In a country where women are treated as minors and are expected to follow the patriarchal norms with unquestioning devotion, women writers have an important role to play in the Swazi society.Lucy Dlamini, ThokoMgabhi, Sarah Mhkonza and ZodwaMotsa are few women writers who through their works create certain awareness aboutoppressive cultural practices that degrade women. In Swaziland, women's writing has not flourished and touched its benchmark. The challenges that these women writers face are quite a number;in order to question certain oppressive cultural factors, these writers have to extricate themselves from the very same cultural norms that they are subverting or questioning in their writings; they have to create a balance between their social roles (daughters, mothers and wives) and their personal roles of being writers or activists; they have to contend with other female writers who conform to the patriarchal norms and with male writers who project women either as sex

---

[1] The phrase "Patriarchal Terrorism" has been taken from Michael P. Johnson's article, "Patriarchal terrorism and common couple violence: Two forms of violence against women." Published in *Journal of Marriages and Family, Volume* 57, number 2 (1995).

symbols, tempting eves or as obedient chattels. It would be appropriate to quote BuchiEmecheta(2005) at this point: "I had realized that what makes all of us human is belonging to a group. And if one belongs to a group, one should try and abide by its laws. If one could not abide by the group's law, then one was an outsider, a radical, someone different who had found a way of living and being happy outside the group" (p. 155). This is the reason that women usually do not question the patriarchal structures since these oppressive norms are embedded and rooted within the Swaziculture. LomceboDlamini (*Women and Law*, Southern Africa Co-ordinator) points out "Swazi Law and Custom is not documented, therefore we don't know its scope and we have learned from experience that it changes from time to time to suit certain people under different circumstances" (quoted in Phakathi, 2005, p. 28). Even though women in Swaziland make up 52% of the total population, they are not the decision-makers and that there is nothing in the constitution that protect women from certain Swazi customs that oppress them (Phakathi, 2005, p. 28). So women feel that it is easy to conform and be part of the system rather than to rebel and be an outsider. Recently, in Swaziland, women writers are slowly emerging to protest and question the oppressive cultural norms within their society.

The practice of lobola (bride price) is one such custom which dehumanizes women and treat them as objects.Lucy Dlamini's short stories, "Dirt to Dirt" and"The Chief's Bride" and Sarah Mkhonza's short story, "Where wasManandi Last Night?" portray the custom of *lobola* andits dehumanising effects on women. These stories also touch on sorrorate(Inhlanti) and levirate (Kungenwa) marriages which are directly connected to the custom of bride-price. Through their short stories, these writersbring in a feminist consciousness about the dehumanization of women through the practice of this custom. Through Dlamini's stories, one realises to what extent this custom of paying bride price promotes gender violence in Swaziland.

The custom of bride price unleashes patriarchal terrorism towards women. The term "patriarchal terrorism" has the advantage of keeping the focus on the perpetrator and of keeping one's attention on the systematic, intentional nature of gender violence. In the family set-up, violence is "basically rooted in patriarchal ideas of male ownership of their female partners"(Johnson, 1995, p. 284). This sense of ownership is reinforced by the idea that the man has paid a price for the woman in the form of cattle. The woman is initially owned by the father (in the absence of father, an elder brother) and the father has a right to 'sell' her to a 'prospective buyer' (groom) who comes with a high bride price and that individual will be her husband for the rest of her life. A woman is literally exchanged as a commodity within the patriarchal economy. In the Swazi society, the bride price is also paid in instalments even after marriage and if the husband dies without completing the payment, then it falls on his

children to continue the payment to their maternal grandparents (in the absence of grandparents, the payment goes to the maternal uncle(s)), thereby this custom extends its tentacles even to the next generation and thereafter, if the agreed number of cattle or its equivalent in money is not paid in full.

In Swaziland, the practice of *lobola* (bride price) has endured in spite of the Western/Christian influences. In the urban area, most of the women in Swaziland who come to seek help from women's organisations like SWAGAA (Swaziland Action Group Against Abuse) and "Women and Law" point out that there is a connection between bride price and domestic violence in Swaziland. The statistics might be even higher if the rural women start talking. Bride Price makes a woman a silent slave and a chattel in the house of her in-laws. Bessie Head (2006) observes that the custom of bride price has overtones of complete bondage to a husband and his family and undertones of a sales bargain" (p. 55) and it "made a woman a silent slave and chattel in the house of her in-laws and even if she was ill-treated by her husband and in-laws she could not complain. Her parents were always anxious that she do nothing to destroy the marriage in case they lose the *bogadi* (bride price in Tswana culture) cattle offered at the time of marriage" (p. 56). This custom creates a power imbalance between the bride and the groom's families: "the custom of bride price refundability in which a husband who is displeased by his wife can return her to his father-in-law and this sets up a power imbalance which can be abused by husbands"(Bishai, Falb, Pariyo, &Hindin, 2009, p. 148).

Bride-price is an established institution in the Swazi traditional marriage patterns. It is considered to be a prestige issue when a woman is valued highly through bride price. The woman is also expected to feel proud and happy. John Ogbu (1978) points out that "the high bride wealth payment is said to result in marriage stability because kinsmen find it difficult to return it and so put pressure on the woman to remain in the marriage" (p. 241). The focus here is the bride price and not the woman. This shows that the woman is trapped within the institution of marriage and that escape is not even an option until she dies. Sometimes when the wife dies, the cruel hands of this custom forces the wife's sister to continue the male progeny. This is referred to as the sororate (*Inhlanti* in Siswati) marriage whereby a man can marry his wife's sister for the following reasons: if the wife dies or proves to be infertile or does not give birth to male children which could be termed as "ineffective fertility."The other type of marriage that is practiced in Swazi society is the Levirate (*Kungenwa* in Siswati) marriage, whereby, when the husband dies, the widow is inherited by the husband's younger or elder brother. In Swazi culture, *Kungenwa* is a custom in which senior members may decide to appoint a younger brother to the deceased to take up most of the responsibilities of the deceased husband. From the anthropological standpoint,

such types of marriages strengthen the ties between wife's and the husband's families. But what is left unsaid is the fact that a woman is treated as an inanimate object, who is not expected to have a say in deciding on how her life should take its course.

Lucy Dlamini's story "Dirt to Dirt" is narrated by a young girl who stands by the grave of her sister, an adolescent girl who is the victim of family violence. The adolescent girl, Hleziphi unable to continue her studies, due to financial constraints, goes to the city to work in the household of a former teacher of hers. There, she is sexually violated by the teacher's husband after which she becomes pregnant and is forced to return home. Her brothers are angry at her and they demand to know the defiler and "bayed for the blood of the errant boy and his father" (Dlamini, 2009a, p. 55). The way they angrily probe their sister to know the name of the perpetrator of this crime, one would think that they would go to avenge the wrong done to theirsister or seek justice yet that is not what happens. When Hleziphi refuses to reveal the name of the man, they call her a "three penny prostitute" (Dlamini, 2009a, p. 55). Later when they come to know that it is her employer's husband, they go to seek him and a couple of days later, they return back with their car laden with farm produce, goat, chickens and other food items. Immediately after their arrival, they blame Hleziphi "for nearly ruining the reputation of a man of God" (Dlamini, 2009a, p. 55). The greediness for materialism of the males does not end at this point; they go one step further to find a husband for Hleziphi, who is a "damaged good" (Dlamini, 2009a, p. 55) since she is no longer a virgin,Maphosa, an old, polygamous man agrees to marry her as his fifth wife by giving a bride price. After her marriage, she suffers a miscarriage and immediately after her first miscarriage, she is forced to cohabit with Maphosa, so that she can prove her fertility since "her bride price of ten cows has already been paid" (Dlamini, 2009a, p.56). Unfortunately she has one miscarriage after the other and this results in physical violence at the hands of her husband who complains that he is "tired of tilling an unyielding field" (Dlamini, 2009a, p.56).Finally, the violence that she suffers at the hands of her polygamous husband accelerates at one point culminating in her death, when he hits her with a "stick topped with an iron knob" (Dlamini, 2009a, p.56). The story ends with Maphosa being taken by the police and Hleziphi's male relatives coming home driving a large number of cattle from Maphosa's cattle byre. This shows males' unquenchable thirst for wealth even at the cost of a woman's life.This story "offers a nuanced critique of the unthinking acceptance of inflexible patriarchal structures that perform gendered violence in the name of masculinist tradition and honour" (Vincent, 2012, p. 182).

From the narration of this story, one understands that Hleziphi is always at the receiving end – receiving abuse and violent treatment from all quarters of her life: in her work place, she encounters violent sexual abuse from the hypocritical "man of

religion," in her family, she meets with physical and emotional abuse from her male relatives and finally beaten to death by her violent husband, in her marital home. All through the phases of her life, her male relatives are portrayed as uncaring, aggressive and selfish people who thrive on women's commodification. They sold her virginity for "meat, live goat, couple of live chickens and bags and bags of farm produce" (Dlamini, 2009a, p. 55). Later, they sell her for ten cows to an old polygamous man and ultimately after she dies, they bring in all "forty plus herd of cattle"(Dlamini, 2009a, p.57) from her husbands's kraal which would compensate for her life. Hleziphi is forced to go through the motions of her family's business bargain where her body becomes their investment. She is depicted as a powerless victim which the traditional patriarchal structure manipulates in the name of culture.

Throughout Dlamini's story, generation after generation of women are portrayed as victims of this custom. As the narrator of the story points out, "My father's younger brother . . . after the death of my father, "bowed down" to custom (*Kungenwa*) by inheriting three of my father's six wives including Hleziphi's mother…" (Dlamini, 2009a, p. 52).When the mother appeals to Hleziphi'suncle, (who is Hleziphi's father now), to help her finance her education, he "threatened to beat and shame her by stopping to visit her hut if she kept on this nagging of hers" (Dlamini, 2009a, p. 52). In Dlamini's other story, "The Chief's Bride,"there is also a reference to levirate marriage whereby, after the death of Tengetile's father, the mother would be inherited by her uncle after the period of mourning is over and the mother lives in constant fear of the man's sexual advances.In this society, women's voices are either silenced by the aggressiveness of men or it is never heard. This reinforces the idea that patriarchy breeds a culture of silence among women. In general, women are portrayed as chattels who are there to do what the men command them to do and this attitude of men makes them as supporters of the slave-holding system in the form of subordinating women.

In Swazi culture, since a woman is treated as a minor, her husband can chastise her by beating her just like he would beat his children.Violence perpetrated in the family is sanctioned by the patriarchal society and the woman cannot complain to her parents because they do not want their daughter to jeopardise the marriage which inturn would result in the man demanding back the bride price. In Swazi culture, if a man accuses a woman of adultery or witchcraft and if it is proved against the woman, then the man can reject his woman and can demand the bride price back. This might trigger some unwanted chain reaction. In some cases, the bride price might be already used to procure a wife for their son whereby a daughter is 'sold' and a wife is 'bought'; one woman is 'sold' to get another, thereby replenishing the labour force in the domestic sphere. The role of an African girl child is defined by Ngcobo (2007) better sums up the position of women in African society:

> She (the girl child) is made aware of the destiny awaiting her development and is prepared from the earliest age possible for the role of motherhood that she will play elsewhere, away from her family home … in some Bantu languages the word marriage is synonymous with journey. In short, from earliest childhood she is an outsider who is being prepared for the central role that she will play at her in-laws. Many young girls will be forgiven for their eager anticipation of their marriage and a place where they finally belong. But …. disillusionment awaits them. This is double jeopardy, for they will never really belong anywhere (p. 534).

So a woman neither has a sense of belonging with her family nor with her in-laws' place. She is just an outsider who is used for procreation to help expand the lineage of a male heir. This is what happens to Tengetile in Dlamini's other story, "The Chief's Bride". Tengitile is given special attention by her father even from the tender age of four after he identifies her to be more beautiful than his other daughters and singles her out to be groomed for a man who would pay quite a number of cattle as part of her bride price. This custom is called *Kwendzisa* in Swazi culture where the males in the family choose a man for the girl, even as early as the child is in the cradle. The special attention given to Tengetile by her father could be equated to that of a calf being groomed to get a good price at the cattle market. He denies her both education and religion (Christianity), which Dlamini uses as pathways of progression and freedom for women in the story by juxtaposing Tengetile with her sisters who go to school and church. Unlike her sisters, Tengetile is groomed to be a chief's wife and so it is necessary that she remains unpolluted by these foreign elements like school and church. The reality is that she will be illiterate and will be dependent and be under the control of a man while her sisters will be literate and independent. Her father's careful grooming of Tengetileattracts the attention of his age-mates, who are wealthy polygamous men:

> From the age of twelve, her father's age-mates would, while carefully maskingtheir lasciviousness behind playfulness, pinch her bottom and she would shriek with pure, unalloyed delight. One of these elders was the chief, she and her father had visited some years back. He was the same one who oneday pulled her on his lap,and holding her by the chin to tilt her face upwards, asked her to open her mouth. Believing that he wanted to admire her faultless set of teeth, she obliged readily whereupon he surprised her very much by pushing his tongue

into her mouth. She was thoroughly revolted by his foul breath and slimy saliva. She gagged and ran to throw up behind her mother's kitchen as the elder chuckled with subdued delight while muttering, "you'll learn soon enough" (Dlamini, 2009b, p. 156-157).

When Tengetile reports it to her father, he does not react with shock or surprise. A girl however young she is, is groomed to satisfy a man's lust and to procreate. From the above quotation, it is understood that the innocence of the minor girl is overlooked by the lustiness of the old man. After the death of her father, Tengitile's uncle tries to arrange her marriage "to her promised spouse, Chief Mntonzima who in his advanced age and surrounded by old hags for wives, needed young blood to stimulate and warm his. He was sure to pay not less than forty cows for her" (Dlamini, 2009b, p. 158).If by chance, if the old man does not want this girl, he has the right to give her to his sons, since he has paid the bride price. To quote Bishai, Falb, Pariyo&Hindin (2009) who discuss bride price in the context of Ugandan culture, is quite relevant to the Swazi culture as well: "the size of bride price payments has become an element of family honour. For the groom's side, the ability to pay a large bride price is a measure of wealth. For the bride's side, the amount received can gauge boththe social esteem of the family and the moral (or sexual) integrity of the bride" (p. 148). So this explainsTengetile's uncle's calculation that his niece would fetch a good price, becauseChief Mntonzima, even though old is wealthy and Tengitile is young and a virgin.

In both her short stories,Dlaminidepicts education as an important tool which would liberate women from such oppressive patriarchal structures.Tengitile, for all her beauty and good looks is illiterate and a simpleton. She wants to write a letter to her lover Macala but she does not know that she needs an address. After she goes to live with him, she could not do chores like weeding and harvesting which would have helped her in taking care of her own financial needs. She is projected as a helpless dependent, since she is groomed to be a chief's bride. The story ends with Tengitile meeting with Fikelephi who assures her that it is not too late for her to pursue some education. Just like her earlier story, Dlamini stresses the importance of education for young girls, in this story.

Anthropologists point out that "the purpose of bride price is to compensate the bride's father's household for the loss of her work" (Kressel, 1977, p. 441) But then the purchase of women through the institution of marriage links this custom to slavery, "focusing on the woman's labor as part of the marriage agreement" (Kressel, 1977, p. 441). "The term "bride-price" is to imply that the payment at marriage is a market or commercial transaction and therefore that marriage entails a commercial purchase of

rights or services" (Dalton, 1966, p. 732). In both Dlamini's and Mkhonza's stories, women are bartered for cattle and if something goes wrong with the woman's primary function of being a procreator and if she becomes infertile, (in the Swazi society, a man could never be impotent) then the husband demands a replacement from the wife's family just like a consumer would demand a replacement for the damaged good he has purchased from a dealer.

Sarah Mkhonza's story, "Where was Manandi Last Night?" begins with the protagonist, Makotikoti wondering about the whereabouts of her husband, that night. She does not have children and she gets treated by medicine men for her 'infertility. So she suspects that her husband might have an affair with Ndabayi who has arrived recently to the village and has opened a shebeen. When the husband comes home in the morning, he evades her by not giving a clear answer to his wife's questions relating to his whereabouts. When the husband once again goes out in the afternoon, Makotikoti starts to follow him only to end up in the shebeen owned by Ndabayi. Her fury knows no bounds and she engages in a fist fight with Ndabayi, inspite of Ndabayi'sprotests that she has nothing to do with herhusband's disappearance.One of the maladies that patriarchy imposes on women is to turn them against one another which basically diverts their attention from the real oppressors, while they fight for their rights. In her angry rustle with the other woman, Makotikoti deliberately breaks the beer pot. So she has to face the village elder who passes judgement on this issue by declaring that Manandi must give a goat to Ndabayi in compensation for the broken clay pot and the spilled beer. Before his judgement, he gives his advice to Makotikoti: "A man cannot be judged by the fury of a woman. He cannot be asked where he was on any night unless a case has been lodged against him by another *man*(emphasis mine). It is his heart alone that knows what he does. This is what we know in this land" (Mkhonza, 2007, p. 32). To the man, he says, "it is not good for a man to disappear at night. If you love any of these women, tell your wife and marry a second wife …. I hope you hear me. You must marry a second wife and not disappear at night" (Mkhonza, 2007, p. 32). The different advises to both the husband and the wife show the inequality of women in the society and that women's role is to serve men.In the Swazi traditional society, if a woman has any complaints against her husband or any other man, she should do it through a male-relative. She could not directly go to the traditional authorities (chiefs) to launch any complaints.

Makotikoti, in her quest to find her husband's hideout the previous night ends up with the unpleasant information that her husband goes to sleep with her sister, LoMabheka. The reason the husband gives is that since his family paid cattle to her family, he is entitled to co-habit with her sister because Makotikoti is barren. A man pays for the fertility rights of a woman through bride price. In Mkhonza's story, the

wife registers her anger towards the patriarchal structure. Just because she is a woman, hers is an impotent rage that almost goes unnoticed. After her attempted failure to deal with the situation and her realisation that she is not fighting individuals but a very strong system against which she is powerless, she starts walking, both literally and figuratively, away from the patriarchal structure. The story is an open ending which could go both ways. She may be permanently rejecting the system which is oppressing her, through her walking away or it may be a temporary rejection and that she might be coming back to live within the same system, once her fury subsides. Both Dlamini and Mkhonta introduce two generations of women (mothers and daughters) being subjugated by the custom of bride price.

The mothers projected in these stories are already helpless victims of the system which is now victimising their daughters. They are either silent witnesses to whatever is happening to their daughters or collude in their victimisation. In Dlamini's stories, Hleziphi's mother suffers with her daughter and she is already a victim of the system since she is inherited by her brother-in-law. Tengetile's mother is a submissive woman who always tries to please her husband in order for him to give permission for his other two daughters to go to school. After his death, she would be inherited by her surviving brother-in-law. In Mkhonza's story, when Makotokoti looks for an alliance in the mother, the mother distances herself from her daughter's problems. All three stories project the might of tradition and the helplessness of the female individual against the "community governed by the law of the father" (Saugou, 2002, p. 70).

Even though the discussed works are set in rural areas, it does not mean that the educated urban women in Swaziland are immune to gender violence. Working urban women have sometimes been targets of violence. They are considered not respectable because they are not living with their families (most of which are in the rural areas) or husbands. Most of the educated Swazi women prefer to live their lives alone without entangling themselves in the institution of marriage that treats them as commodities. Even though they have earned their freedom by living alone, they would remain as social outcasts. Patriarchy sees such single women or single mothers (in some cases) as witches or as sexually voracious or as lesbians (Douglas, 2000, p. 9). In Swazi society, reforms are needed not only at the societal levels but also at the legal levels to correct certain customs that encourages female subordination and power imbalance between men and women. To conclude, it would be apt to quote a Swazi adage often heard in political debates, local newspapers and other media sources: "sibahleSinje" which means "we are beautiful just as we are" (Hall quoted in Daly, 2001, p. 46). Another common slogan repeated frequently in Swazi society is "to change is unswazi". As Daly (2001) points out these maxims denote the people's preference for stability and their desire to resist outside forces of change. Nevertheless while change appears

painstakingly slow by industrial societies' standards, it is occurring and is likely to increase rapidly in the next decades (p. 46).

References

1. Bishai, D., Falb, K. L., Pariyo, G., &Hindin, M. J. (March 2009). Bride price and sexual risk taking in Uganda. *African Journal of reproductive Health*. 13 (1), 147-158.

2. Dalton, G. (1966). Brief Communications: "Bridewealth" vs. "Brideprice". *American Anthropologist* 68, 732-738.

3. Daly, J. L. (2001). Gender equality rights versus traditional practices: struggles for control and change in Swaziland.*Development Southern Africa*. 18 (1), 45-56.

4. Douglas, C. A. (March 2000). Gender Violence in Africa: African Women's response.*Off Our Backs*. 30 (3), 9 & 19.

5. Dlamini, L. (2009a). Dirt to Dirt.*Africa Kills her Sun and Other Stories*. Ed. by V. Mamba. Johannesburg: Ilima Publishers, 51-58.

6. Dlamini, L. (2009b).The Chief's Bride.*Africa Kills her Sun and Other Stories*. Ed. by Velaphi Mamba. Johannesburg: Ilima Publishers, 2009. 154-162.

7. Emecheta, B. (2005).*Head Above Water*. Cambridge: ProQuest LLC African Writers Series. www.collections.chadwyck.co.uk.

8. Head, B. (2006).*A Woman Alone.*Cambridge: ProQuest LLC African Writers Series. www.collections.chadwyck.co.uk.

9. Johnson, M. P. (1995). Patriarchal terrorism and common couple violence: Two forms of violence against women.*Journal of Marriages and Family*. 57 (2),283-294.

10. Kressel, G. M. (1977). Bride-Price Reconsidered.*Current Anthropology*. 18 (3), 441-458.

11. Mkhonza, S. (2007).Where was Manandi Last Night?*Two Stories*. New York: Vista Periodista, 25-36.

12. Ngcobo, L. (2007).African Motherhood – Myth and Reality.*African Literature: An Anthology of Criticism and Theory*. Ed. T. Olaniyan and A.Quayson. Malden: Blackwell Publishing, 533-541.

13. Ogbu, J. U. (May 1978). African Bridewealth and Women's status.*American Ethnologist*. 5 (2),241-261.

14. Phakathi, M. (October 2005) Women feel left out of constitution.*The Nation*.28-29.

15. Sougou, O. (2002). Writing Across Cultures: Gender Politics and Difference in the Fiction of BuchiEmecheta. New York: Rodopi.

16. Vincent, K. (Summer 2012)Anglophone fiction in Swaziland.*Research in African Literatures*.43(2), 173-185. http://www.jstor.org/stable/10.2979/reseafrilite.43.2.173.

A CRITICAL APPRAISAL OF CULTURAL BACKGROUND IN BAPSI SIDHWA

Dr. Sumathi K. Sripathi
DMI SEU-IVDL
Lusaka, Zambia, Africa

In India, the past never disappears. It does not even become transformed into a ghost. One can find Concrete, physical, palpable that is present everywhere. Ruins, monuments, litter in the streets, the traffic congestion, strange islands in the modernity of the cities are the common changeable forms of everyday life with lingering past embedded in it. No one fears or avoids them and they remain a part of the here and now, of today. In other ways, too the past clings as sticky as glue or syrup in the traditions and customs. No further explanation is required than this as it has been so and it must continue to be so.

The social consciousness of Bapsi Sidhwa is sharp, acute and focused on the traditions and customs of the past, continuing to exercise a sway even in the present, when there is a greater exposure, elitism and sophistication than in the past. Bapsi Sidhwa with perfect candor examines the effort of tradition, customs, superstitions and patriarchal domination over women, the stereotyped roles devised by the male chauvinists, the tendency to accept submission, dependence and inferiority status.

Four textual passages is taken to consider the article statement of this writing, each dovetailing the other, to highlight how traditions and customs rule the life of the Muslims. The first passage referes to the gun culture of the mountain tribesmen, which is a custom and it reads thus, "The double barreled gun that he [Quasim] stood beside him and the bullet-crammed bandolier swathing his chest gladdened his heart and gratified his pride, for a gun is a part of tribal's attire. It shows his readiness to face his enemy and protect his family's honour (20)"

In the second passage Bapsi Sidhwa traces his difference of the tradition of the pains and that of the mountain tribesmen and it reads thus

> Girdharilal, faint with shock, trembled while Quasim hurled abuse and threats of vengeance at him in are hill dialect. Girdharilal did not catch a single word, but he could not miss the meaning…A senior officer appeared. The situation was explained to him, and Quasim was ordered to apologize. He refused and his clansman was sent for. After a roaring argument, the clansman finally persuaded Quasim to say the necessary words. He uttered them with the grace

of a hungry tiger kept from his victim by chains. An uneasy peace ensued. Quasim learnt from his cousin that killing no matter, no matter what the provocation, was not acceptable by the laws of this land. He would be caught and hanged. These were the plains, with no friendly mountains to afford him sanctuary (23).

The third passage refers to the disparity between a girl-child of the plains and the mountain tribesman. The girl-child is left alone after her parents were brutally killed by the Sikhs during the partition clashes and it reads thus,

Qasim drew her [the orphaned girl child of the plains] to him. "What is your name?"

 "Munni." "Just Munni," "You must have another name…. Do you know your father's name?" "My father's name was Sikander." Her use of the past tense startled him. It showed a courage and fore-bearance that met the exacting standard of his proud tribe(30)

The fourth textual passage points out how ill tempered the mountain tribesman becomes when he is asked by a man of the plains about his wife, and the dialogue makes interesting reading and it runs thus

Zaitoon smiled happily at the affection shining in his face, "Put me down. I want to play." "Alright." he said, lowering her. "Is she your daughter?" the Pehelwan asked. Qasim grew tense. "You heard her." "Where is your wife?" "Dead" "Was she also a Pathan?" Nikka enquired. "The girl is dark." Qasim glared at the wrestler, "Look," he snarled, with a sudden hold on the man's wet, Muslin shirt, "nothing about my wife concerns you…. I am not a Pathan. I am a Kohistani."…(36)

Yet again, women prefer to lead the life of suspension. They never assert. They do not appreciate the truth that female empowerment alone can enable a women to shed their dependent and inferiority complexes and fear psychosis.

Bapsi Sidhwa is a Pakistani woman who is a great genius artist and she projects herself as an accomplished fictionist with great depth and verse. Bapsi Sidhwa was born in Karachi in 1938, in a prominent business family. As a lonely child, Bapsi Sidhwa, read a great deal. In fact, she was a voracious reader. This equipped to establish her reputation of a writer of eminence. Bapsi Sidhwa makes her positon about writing in English very clear.

I'm so fond of reading, and I used to think that a writer was some sort of a being who lives in another sphere. I never thought of the writer I human terms but almost as some disembodied power that automatically produced books. And suddenly by telling me that she [the Afghan woman] was a writer, she made me

realize that writers ae very flesh-and-blood persons. And that did make me want to write(5).

It is an acknowledged fact that Bapsi Sidhwa is Pakistan's finest woman English language novelist. In her fictions she convincingly and persuasively deals with the partition crisis, expatriate experience, Parsi culture, the Parsi milieu and social idiosyncrasies of the small minority community in India and Pakistan, the theme of marriage, women's problems, patterns of migration, the complexities of language and the art of story-telling. Bapsi Sidhwa is a distinctive Pakistani and yet Parsi ethos in her fictions, but above all represants a unique individual voice. It is this sense of individualism which makes her one of the finest writers in English.

Bapsi Sidhwa uses English without inhibitions. She also has strong political reasons for writing in English. She feels that writing in English increases the scope of her works of fiction. She feels that English is the language of the privileged, the elite and the powerful. Above all she feels that it is important to write Enlish because English has emerged as the major world language.

Bapsi Sidhwa through carol asserts that every nation has its own outlet of cruelty against women. Carol reminisces over the observation of Farukh, which is a package of male notions steeped in male pride, chauvinism and arrogance. Farukh maintains that women all over the world invite pains and miseries on their own selves, which runs thus, "Women the world over, through the ages asked to be murdered, raped, exploited and enslaved, to get importunately impregnated, beaten-up, bullied and disinherited. It was an immutable law of nature…(226)

Carol turns furious after listening to such a sweeping generalization of women made by Farukh. The final dialogue between Carol and Farukh reveals the kind of bold stance that Carol takes the right option of open to a woman, who is dominated, denied, deprived and dehumanized by her husband who is out and out chauvinistic, and it is worth quoting here

> "You know, the girl [Zaitoon] who ran away? I think she forced her destiny; exercised her khudi. I'm sure she will make it….." "Perhaps." "Christ! If she comes through I'll do something for her, I really will." There was responsibility in her voice and a new determination and Farukh sensed the change in her. "And…..Farukh?" "Yes?" "I think I'm finally beginning to realize something…. Your civilization is too ancient…..too different…. and it has ways that can hurt me….really hurt….I'm going home." "Lahore?" "San Jose."…(229).

In the end the empowered Carol shakes off Farukh and plans to leave for San Jose, whereas the less fortunate, suspended woman, Zaitoon hopes to go to the United States of America with the help of Major Mushtaq and Carol. Here before one turns the focus

on the other fiction, *An American Brat*, of Bapsi Sidhwa, a study of female determinism is necessary.

It is in this context, the feminist woman writer; Bapsi Sidhwa raises her banner of opposition. She is not prepared to accept all the Freudian concepts concerning feminine passivity, feminine masochism and female narcissism. She does not accept Freud's argument that limits female life to one of sexual reproduction. Bapsi Sidhwa argues that women should evolve out of the low cultural level earmarked for them by the male dominated society. She does not allow much credit to the argument that identifies masculinity with force, indifference, egotism, property and feminity with passivity, masochism and narcissism.

It is with such a background study where some of the points are reiterated Sidhwa's *An American Brat* and *The Pakistani Bride*. The female protagonist of *An American Brat*, is a young daughter of Zareen and Cyrus. Her mind during the stay in Lahore is packed with puritanical rubbish and backwardness. She is not willing to step out of conservative, tradition-bound, custom-ridden stand. She is not progressive in her thinking and acting. She wants to stick to the old ways of dressing and female conduct in and out of her home. In fine, she accepts the life of female suspension. But then a sea change transforms the complexion of her life after she lands in New York. The exposure to America, Americans, and American mainstream culture brings about a change in her outlook. She sheds her backwardness and emerges as an empowered woman with a sophisticated attitude and elite views. America causes a transformation in her by pulling her out of the suspension and places her on the pedestal of an empowered female. As the young lady of well-to-do parents of Parsi origin, Feroza becomes aware of the mixed cultures and the inter-religious atmosphere, with absolutely no traces of fundamentalism. The textual passage from Bapsi Sidhwa's 'An American Brat' makes interesting reading and it is worth quoting here,

> Given the medley of religions that exist cheek by jowl in the subcontinent and the spiritual that sustains them, people of all flocks flock to each other's shrines and cathedrals. They came to the fifteenth century *sufi's shrine* from all over Pakistan and before Partition they came from all over North India. When sikh and Hind pilgrims from across the border in India visit the temples and *gurudwaras* in Pakistan, they never fail to pay their respects to the Muslim mystic known for his miraculous power to grant wishes… (18-19)

The point that is made is that the Parsi girls and Parsi boys are not given the same opportunities to gain education. The girls receive less education than the boys. With perfect orientation and indoctrination Feroza becomes fully knowledgeable about Parsi religion and the textual passage from Bapsi Sidhwa's An American Brat testifies to the arguments adduced

Feroza also liked to watch the priest, luminous in a froth of starched white robes, decorously feed the fire with offerings of sandalwood from long handled silver ladle. The narrow side door of the *agyari* was open. Feroza covered her head with a scarf, daubed her eyes with water from a silver jar and performed her *kusti* in the lobby. As she unwound her sacred thread girdling her waist and retied the knots in the front and the back, she asked *Ahura Mazda's* forgiveness for every ignoble thought, words and deeds she was guilty of and prayed that she might have the good thoughts, the eloquent tongue and the strength to perform the deeds that would advance 'His Divine Plan'. Having thus girdled her loins in the service of the lord, she entered the circular hall fragrant with sandalwood smoke and frankincense… (41)

In New York, when Feroza finds lost in the stairwell she frantically prays to *Ahura Mazda* and recites the *Kemna mazda* prayer to escape from the stairwell and reach her room. Though exposed to American mainstream culture and having progressive thinking and acting, feroza does not free her-self from the Parsi culture.

In her exposure to Western culture Feroza smokes cigarettes. But then she soon realizes that she has committed a cardinal sin for it is against Zoroastrianism to smoke for the Zoroastrians worship fire. Marriage is the high point in the life of a Parsi girl.The textual passage in Bapsi Sidhwa's *An American Brat*, refers to the Parsi marriage customs thus

"We will have the *madasara* ceremony first. You'll plant a mango tree. it's to ensure fertility. May you have as many children as the tree bears mangoes. In all ceremonies we mark your foreheads with *vermillion*, give you envelopes with money, hang garlands round your necks and give you sugar and coconuts. They are symbols of blessing and good luck…(297)

However much a person climbs in the social ladder or amasses wealth and gains higher education, the Parsi is not willing to come out of his community and its rigid prescriptions from the social and religious angles. This is so very true of Manek, his sister Zareen, her husband, Cyrus and Feroza, her daughter. The Parsi girl is not permitted out of her community. In other words, the Parsi community never approves of mixed marriages.

The Parsis occupy high position in society especially in Mumbai, India and in Karachi and Lahore, Pakistan. Many of them are highly placed and well educated. But still the Parsis have not shed their superstitious notions of life. Feroza is about to leave for New York. It is then, Khutilibai, her grandmother with faith in superstition expertly cracks her knuckles on her own temples to remove the envious and evil eye from her lovely granddaughter, Feroza. And when Manek, the brother of Zareen, came to India to marry, Khutilibai circles the air around his head with her hands, at the

same time sprinkling him with rice. The energetically cracked her knuckles on her temples and thus she warded off stray evil and envious eyes.

Feroza returns to Lahore after her preliminary studies, her grandmother and mother with a welcome that is coloured by superstitious rituals received by her. The textual passage in Bapsi Sidhwa's *An American Brat* refers to the superstitious practices of the Parsis even in the Postmodern world

> The portals of the house has been strung with perfumed chain of red roses and the floor before it made auspicious with stencils of fish, flowers and lettering in English reading 'Welcome'…. Freny held out the ceremonial silver tray while Zareen circled an egg seven times round Feroza's head. She [Feroza] leaned forward so that Zareen could anoit her forehead with the red paste and press rice on it…(298)

Thus in reality the content as explicated in this article seems to be reflecting gender differences and the plight of women in the subcontinent. *An American Brat* is woven as a funny and a memorable novel while *The Pakistani Bride* is a typical first novel serving as a showcase of feministic sensibilities of the author. Both the novels bring forth thousand constraints that govern a woman's life, what men can do, where it cannot be done by women. Yet a woman gets thrilled at the idea of having her own money, her own career and her own identity. Overall, the novels are a reflection of Bapsi Sidhwa's sincerity and passion of her inner self.

References

1. Sidhwa, Bapsi. *The Pakistan Bride*. New York: Penguin Putnam, Inc., 1983. Print.
2. *An American Brat*. New York: Penguin Books USA Inc., 1993. Print.

IMMIGRANT EXPERIENCES OF SOUTH ASIAN WOMEN: A STUDY OF MEERA SYAL'S *LIFE ISN'T ALL HA HA HEE HEE*

J. Bhavani
Assistant Professor of English, Holy Cross College, Nagercoil

The present paper is an endeavour to trace diasporic experiences in Meera Syal's *Life Isn't All Ha Ha Hee Hee* experience by South Asian Women in England. The recent Indian women writers unlike their predecessors discuss issues suited to the modernity which Indian women wish to adopt. The contemporary women writers can be classified into two categories, the first group of writers write residing in their own country and the second set of writers write from the alien land where they reside. Some of the common themes chosen by the immigrant writers are alienation, nostalgia, identity crisis, homelessness, in-betweensess and so on. The novels written by these writers are mostly based on their own experiences as immigrants. The expatriate writers are merely act as representatives of the collective diasporas in all over the world in mirroring their inner longings and belongings.

Meera Syal, a South Asian second generation immigrant writer was born on June 27, 1961, in Wolverhampton, Staffordshire, England to her Punjabi parents. Syal is an actress, Writer, playwright, singer, journalist and producer. Her fame rose high as she became part of *Goodness Gracious Me* and became one of the United Kingdom's best-known Indian personalities portraying Sanjeev's grandmother, Ummi, in *The Kumar's at No.42.* Having grown up in Essington, a mining village few miles away from West Midlands serve as backdrop to her first novel, *Anita and Me* which is Syal's semi-autobiographical novel. The novel also won a Betty Trask Award and was shortlisted for the Guardian Fiction Prize; it has also been made into a successful film.

Syal has three novels in her credit; respectively *Anita and Me* (1996), *Life Isn't All Ha Ha Hee Hee* (1999) and her recent novel *The House of Hidden Mothers* (2015). *Life Isn't All Ha Ha Hee Hee* was later adapted into a three-part BBC television miniseries in 2005. Though the novel has some comic elements, it deals with a most serious subject. The novel is constructed around the lives of three new generation British Women who have been childhood friends and are now in their 30s and at a crossroads in life. Syal often takes into consideration young adult or adult women for her analysis. Meena the protagonist in *Anita and Me* is a young girl who struggles to withstand and is eager to place herself among the Tollington wenches.

Life Isn't All Ha Ha Hee Hee is regarded as the continuation of Syal's first novel. The novel focuses on three childhood friends Chila, Tania and Sunita. Their intimate friendship plays an important role in the movement of the story. They explore the possibilities of living differently in the suburban London. The novel also provides an interesting perspective of British-Asian life in the East End of London. The very beginning of the novel marks an Indian wedding procession down a snowy London street. Syal writes, "The horse turned the corner into his road, white enough to shame what fell from the sky, carrying what looked like a Christmas tree on its back. There was a man in the middle of the tinsel, pearls hanging down over his brown skin, suspended from a cartoon-size turban (LHH 10)". Chila, the youngest of the three is wedding to a handsome man Deepak, of her same origin.

Chila unlike her other two friends is an ardent believer of her parental tradition who waits till her parents find a suitable pair for her. The novel though takes place in a Western country; Syal has cleverly brought into light the Indian parents' feelings when their daughters are married to someone. The narrator says, " please God, don't take our daughter from us, our baby leaving us for ever, please God, keep her safe (LHH 23)". Chila has always been described by the author as simple, delicate and timid. She faithfully obeys her traditions and accepts her parent's arrangement because she is convinced that the elders would make the best choice for her. The early marriage days of Chila and Deepak seem to be sweet and harmonious.

Chila and Sunita participate in family functions so as to get acquainted with their traditions and customs. Being second generation immigrants, chila and Sunita who have never visited their native soil, inherit certain Indianness and move away along with that. Chila's this particular quality is registered in a website, it says:

> But I know that this is impossible, because my culture has provided me with a set of values that form the framework of my life. The sense of inclusiveness I feel whenever I attend any gathering or religious function is a sense of comfort, of belonging. Chila knows and even accepts this, asserting that "some of the old rules hold you up." As narrow-minded as this might appear, the certainty of knowing what's accepted and what is not is often a secure corral, and one that I remain in most of the time. (WWW. Nazarmagazine.com)

Chila wish to perform her familial duty in a serious and sincere manner but really shattered when she learns her husband's illegal relationship with her own friend, Tania.

Chila's motherhood encourages her overcoming from her passiveness and ready to withdraw her relationship with her husband Deepak. Having inherit certain values from her parents who are the first settlers of England, Chila at any cost wish not to abandon it. Her husband's behaviour which is against her culture infuriates her and in

order to be comforted, she decides to visit India, her native land along with her small son. Sunita, the eldest among the three was once rebellious and a feminist activist. But her upbringing motivates her to marry a man of her same origin. She is a devoted wife and mother. Soon she is fed up with her dual responsibility as a mother and wife. She longs to live a life for her and decides to detach herself from her familial burdens. But she never gives chance to violate her cultural norms, she always reminds that, "I am married (LHH 123)". And also Sunita in an attempt to console her says, "I have a husband who I wanted to marry and I love, I have two perfect children, I have a job, it's not what I hoped for but as much as I can expect, I am lucky, I should be happy, I ought to be happy, I will be happy (LHH 124)".

Among the three Tania, a strong personality wishes to lead an independent life and is careful enough to not to confine herself in a small circle. She commences her life enjoying her time with her white British man, Martin and a glamorous job as a television journalist in Soho, meanwhile breaking her connection with her family members. According to Tania, her "culture is a movable feast (LHH 148)". When talking about Tania's strong character, Cecila Rosa Acquarone marks,

> Tania, is the one to offer greater resistance to the pressures of the Indian community and to be more open to Western influence. On this account she is rejected by prospective husbands procured by her family who judge her as "too modern", "too western", "a bit of a slapper", or not ready to adjust to the closed community of Indian social life, which she finds claustrophobic. (Acqarone 171)

Tania is left alone in a certain condition which makes her to long for comfort which her family can offer. She regrets for her relationship with Chila's husband and she seeks apology from her. Chila, Sunita and Tania's friendship is renewed when Tania helps Chila to get her son back from Deepak's hand. Tania too realizes at the close of the novel that she can be safe within her own community and community members.

Life Isn't All Ha Ha Hee Hee, portrays tremendous changes faced by the three London women of South Asian descent in terms of relationships and belief systems. Syal's three heroines undergo the double oppression which complicates their life. Apart from friendship, Syal also deals with issues of migration, shifting identities, cultural hybridities and also fractured relationship with home and marriage. Syal has analysed immigrant experiences of South Asian women in her second novel *Life Isn't All Ha Ha Hee Hee* which is a subject of deep concern in present scenario. Syal's characters are cautiously crafted to detonate the established stereotypical versions of British Asian female identity.

Works Cited

1. Syal, Meera. *Life Isn't All Ha Ha Hee Hee*. Black Swan, London. 2000.
2. http://www.nazarmagazine.com/2009/02/19/life-isnt-all-ha-ha-hee-hee-personal-reflections/
3. Acquarone, Cecilia Rosa. *Barriers, Borders and Crossings in British Postcolonial Fiction A Gender Perspective*. Cambridge Scholars Publishing, UK: 2013.

DISTRESS OF THE BLUES-A STUDY OF ANOTHER COUNTRY BY BALDWIN

G.Sudha
*Ph. D. Research Scholar, Assistant Professor of English,
Senthamarai College of Arts and Science, Madurai*

African American literature having the influence of African slavery and American colour conflict with the depth knowledge of sufferings, longings and worries belongs to the coloured people.*AnotherCountry* is an intricate novel about a diverse group of idealistic but often troubled individuals in New York City. The novel is unified by the character of Rufus, a young black musician who commits suicide early in the novel but remains a vital presence in the awareness and the memory of others.*AnotherCountry* is a novel of passions sexual, racial, political, artistic that is stunning for its emotional intensity and haunting sensuality, depicting men and women, blacks and whites, stripped of their masks of gender and race by love and hatred at the most elemental and sublime. In a small set of friends, Baldwin imbues the best and worst intentions of liberal America in the early 1970s. African American literature differs from most post-colonial literature in that it is written by members of a minority community who reside within a nation of vast wealth and economic power.Baldwin created such an intense and suffocating piece.He, who fled to a more liberated France while writing this book, explores another side of his home country and hometown. It's deep summer in New York City in the 50s. There's jazz, filth, liquor, art. The city is experiencing an undercurrent of racial tension. Race is a common theme in African American literature. Here race is distinguished through colour different-black-white. What being black means but this little bit that Baldwin gives a piece that helps us to keep the mind open to different realities than mine.Baldwin considered race America's poison pill. And he deftly portrayed Americans of all colours struggling to concoct their own individual antidotes solutions that are temporary at best and always crazy-making because, at root, the problem is structural not individual. Baldwin says about the colours in America like as a Negro he represents a level of experience which Americans deny. And time only will prove the connection between the level of the lives we lead and the extraordinary endeavour to avoid black men. It shows in our public life. In the way, the American Negro is the key figure in the country and if you don't face him he will never face anything in the world. The book *AnotherCountry* divided into three different parts: Easy Rider, Any Day Now, and Toward Bethlehem. The first part

begins by narrating the last day of Rufus Scott's life in a November in the late 1950s with digressions that shows how he has come to the point of suicide. Then it shows his White friends responding to his death. This part ends with the following March, when Vivaldo Moore begins an affair with Ida Scott.

The second part discussed Eric Jones and Yves in southern France, and then follows Eric to New York in early summer, where he renews old friendships. During the summer, Cass and Richard Silenski's marriage comes apart, Cass begins an affair with Eric, and Vivaldo and Ida's relationship unravels. This part ends with Cass's confession to Richard, which brings an end to her affair; though very painful for both of them, the episode seems to hold the promise of renewal of their marriage. The third part opens with Vivaldo and Eric making love. This part brings love between these two men into the open and releases them into new understandings of themselves and of the nature of love. Vivaldo confirms that he is not homosexual, all also that he need not be afraid of loving a male friend and expressing this love physically. *AnotherCountry*and shows how they lived the racial tension between blacks and whites. In their turn they had to deal with conflict that showed how much or how not so liberal they were. Their search for meaning, love, connection was and is universal regardlessof race. But racial and historical differences will raise their ugly heads. This is not just a story of plot.

Race is a common theme in African American literature. Here race is distinguished through colour different-black-white. What being black means but this little bit that Baldwin gives a piece that helps us to keep the mind open to different realities than mine.Baldwin considered race America's poison pill. And he deftly portrayed Americans of all colours struggling to concoct their own individual antidotes solutions that are temporary at best and always crazy-making because, at root, the problem is structural not individual. Baldwin not only depicts the loneliness and rejection that the saxophonist feels, but the alienation that Rufus lives with. It's Rufus who projects the question onto the music, revealing his inner pain. Rufus is actually the one asking the question, looking for love, searching for a connection to others in order to resolve his alienation, but as is reflected in his suicide. Rufus felt alienated because his colour in the city in front of others. Baldwin as an African American he gently conveys his race thought like "she looked up at him with her sad-sweet, poor-white smile" (27). He didn't took so much of effort to convey his idea where as he used such a simple word 'white smile', it gives us whole meaning of his deed. And again he quotes "he was black and the water was black" (93), here he try to say that a person's thought should be free and clean otherwise his all steps will become as what he was. Through these kinds of simple narrative he occupies his readers psyche.Baldwin offers glimpses of her inner wants and needs. She seeks the time of her youth, a time when she was able to feel both pain and love.

She felt his violence and his uncertainly, and this made him seem much younger than she. And this excited her in a way that she had never been excited before...then she was frightened. She was frightened because she had never before found herself playing so anomalous a role and because nothing in her experience had ever suggested her body could become a trap for boys, and the tomb of her self-esteem. (287)

Baldwin says about the colours in America like as a Negro he represents a level of experience which Americans deny. And time only will prove the connection between the level of the lives we lead and the extraordinary endeavour to avoid black men. It shows in our public life. Rufus has been deeply wounded by the realities of racism. He is an embodiment of the curse that lurks in the American soul.

Rufus, said Baldwin, is the black corpse floating in the national psyche he and what he represents must be squarely faced if we are to find peace in ourselves and our society. The presence of Rufus, then, is at the source of all the relationships in *Another Country*. Each character has been touched in one way or another by him, by his agony. Rufus Scott is the Christ figure the sacrificial victim in this parable of James Baldwin's 'gospel.'

Because Rufus is living in a predominantly racist time era, his life is constantly affected by an internalization of this racism to the point where he hates himself. Throughout the novel, the effects of this internalized oppression are obvious: he is sexual with any person who is white—violently sexual, because he seeks power; he feels disappointed in himself because of his proud black sister Ida, and avoids the support of his family during his last day of life. The concept "another country" reflects not only the return of Eric to the United States from France, but also the feelings of alienation experienced by African Americans within the United States.The novel was unique at the time in its attempt to explore race relations through romantic love instead of homosocial friendships.

References
Primary Source
1. Baldwin, James. *Another Country*. Great Britain: Penguin Books, 1990. Print.

Secondary Sources
1. Bone, Robert A. *Negro Novel in America*. New Haven: Yale UP, 1965. Print.
2. Sharma, Asha. *James Baldwin: Protest and Beyond: A Study of Afro-American Fiction*.New Delhi: Rajat Publications, 2005. Print.
3. Klein, Marcus. *After Alienation: American Novels in Mid-Century*. New York: World Publishing Company, 1962. Print.

WOMEN PORTRAYED AS MOTHER IN THE SELECT SHORT STORIES OF MAHASWETA DEVI

J.Rajeswari
Ph.D.Research Scholar,
Mannar Thirumalai Naicker College, Madurai

Abstract

The women are portrayed as woman because of the strict conventional belief weaved around them by the male-dominated patriarchal society from the very beginning of human race. A woman is generally defined as 'subordinated being incapable of taking decisions' or leading an independent life. Even in twenty first century, the western society declares women as subordinated creature and nourishes this mythology and psychology about her still. There are various social flaws and evils flowing in the veins of patriarchy which is curse for the women as well as jolt on humanity.In this paper, I would discuss the women were subjugated by the Male society and they finally achieve an authoritive sense and power to lead their own life. they becomes the decision maker of their life.

Writer and activist Mahasweta Devi, Who passed away a prolonged illness , Author of more than a hundred books, including novels, plays, and collections of short stories; Mahasweta Devi is the leading contemporary writer in Bengali, the language of the state of West Bengal in eastern India, and of neighboring Bangladesh as well. Translations of her work into other Indian languages and into English have brought her national and international recognition. One of several modern Bengali writers committed to social and political critique from a leftist perspective, Mahasweta (the Devi in her name is a term of respect attached to a woman's name in Bengali) Writes about peasants, outcastes, women, tribal peoples who live in the forest regions of India, and other marginalized groups struggling to survive and resisting their exploitation by dominant groups. Her fiction and plays are distinguished by a powerful, direct, unsentimental style and by the sensitivity subtlety with which she approaches the themes of struggle, resistance, and empowerment.

Mahasweta Devi was born into a family of distinguished and politically engaged artists and intellectuals in Dhaka (Dacca) in the former East Bengal (now Bangladesh). After graduating in 1946 from Santiniketan, the famous alternative school established by Rabindranath Tagore, she devoted several years to political activism in rural Bengal, in collaboration with her husband. During this time she held a variety of jobs, including teaching. Her writings are socially relevant than any other contemporary writer. Infact the truth is that no one has written. So prolifically, as she has done at the global level, for the underpriviledged section of the society.

Mahasweta Devi started writing seriously in 1952-53. She contributed to Suchitra Bharat under the pen name Suchitra Devi. From the very beginning, Mahasweta Devi showed an inclination to break away from the conventional pattern of Bengali writing, both at the formal and thematic levels. Her novels reveal a strong sense of commitment to the exploited classes of society- the tribal peasants, the city proletariat, and women. It would not be an exaggeration to say that in our times, Mahasweta Devi is the only Bengali novelist in whose works, one of the main battles of Indian society i.e, feudalism vs. the peasant class, is reflected in its right perspective. Her first novel Jhansir Rani (1956,) based on the life of the Queen of Jhansi is a famous work and has been translated into English recently. Mahasweta Devi has won several awards for her literary and social works. The most famous among them are the Sahitya Akademi, Jnanpith, Padmashree and Magasaysay Awards.

The aim of my paper is to discuss to deep concerns of the women are portrayed as mother in Mahasweta Devi's short stories of "Sindhubala" and "Giribala". I will start with a question that whether a 'mother' is marginalized in any form? Or a mother's action can be questioned in the discourse of 'marginalization'? Or does her physical attribution become an issue in this discourse? The underline distinction between motherhood and the idea of motherhood, as Mahasweta Devi refers the juxtapose emotions of motherhood with the constructed notion of motherhood: "These works demonstrate how the traditional deification of motherhood can oftenconceal a collective attempt to circumscribe women within socially prescribed roles, while denying them the right to articulate their individual needs and desires"

Women are always subjected in defining their vulnerable position no matter whether they are mother, daughter, or wife. Devi explains this matter effectively while referring to women as goddess and mother like. In her story "Sindhubala" Sindhubala is portrayed as dark skinned with "bulging forehead, snub nose" (Sindhubala, 38) by her mother, however, at the same time her feet are attributed as auspicious because it entered the first world. As Devi narrates, "Sindhu, it is said, had entered the world feet- first. Ever since, Sindhu's feet have been deemed very auspicious" .

More over, Radha Chakravarty describes that, 'Sindhubala' describes the anguish of a woman forced to play the role of a divine healer, called upon to save the lives of other people's offspring while suppressing her own physical and emotional needs . On the other hand, her physical beauty is not well enough so that she is thought to be a burden to her family. Later, she gets married to Sanneshi but it does not work out. Being rejected by her husband, she is thought as an outcast with the possession of supernatural power and vice- versa. This thought is made up by her mother and Manudasi, a tactical step to earn their livelihood.

Eventually, it works out until Sindhubala realizes that this goddess like act "premised upon hollow self-denial". She urges to become a mother, a real mother, but her barren body does not allow her to become biological-mother and this harsh truth become the 'other' matter or a matter of laxity and so thus she is not allowed to think about it. On the other hand, her divine feet become the source of livelihood which is also a part of the exploitation of the female body. It is her situation that makes her more resistance and asceticism. Actually, this so called supernatural power depends upon her self-denial of mothering. Additionally, being a spiritual mother, her position is being dignified but she also has lost the social contacts. She becomes a super 'I' by escalating and eliminating herself from 'normal social or domestic life'.

She has bound to earn her livelihood through creating a sensation of become a goddess like or devangshi (goddess) otherwise she might remain as poor. She was forced to leave her in laws house because she does not look fair and beautiful. Paradoxically, this physical feature becomes her only instrument to earn her livelihood. Her birth story and physical appearances escalate her position as goddess in the society. Her body becomes divine, so thus people come with their children for a blessing. Even her husband's another wife came with her son for her blessing. The ironic phase is that she is discarded for her physical appearances. She lost her domestic life for that. Her barren body becomes a symbol of purity in nature in order to become an idea of supernatural power.

However, Mahasweta Devi compares this whole supernatural business and becoming a goddess with another incident of nearby. As Manudasi, a female character of the story, talks about, One of them lived in this very neighbourhood. Nobody knew who she was in her prime. When she died, they found her house full of only cockatoos and parrots (2011, 43). The comparison sheds light on Shindhubala's mental condition. All through her life she is driven by other forces. Even her supernatural figure develops based on her mother's perception of living life. She merely faces the consequences of all these events. Rather, I get to know her by reading the incident where she feels lonely and urges to become a real mother. She compares herself with the neighbourhood lady. She feels that she will die alone in her empty house. She compares her physical bareness with social emptiness, her surroundings. She never gets proper treatment from the society. Society always criticizes her as she is not able to give a birth of a child.

She remains alone and deserted from domestic life. It proves her marginalization within her own community. Moreover, it also explains that unlike her surroundings, she is all isolated and deprived. Later she withdraws herself from supernatural act in order to calm her own mental trauma. She releases herself from social bondings and responsibilities because society is not able to give her anything. It is not able to fulfill

her wishes, her desire to become a mother. She realizes and let the readers know that, If you're human, you must burn. If you're holy, then too you must burn. If life has the same end for both, then why should the woman Sindhu spend her days pretending to be a goddess. Her story implies that women in both ways are docile and isolated, whether she is a goddess like or as a normal human being. In many situations, she is not considered as human beings rather she is treated as untouchable because of her physical appearance.

Another story of Mahasweta Devi, "Giribala" demonstrates the traditional rule of paying the money for the bride's hand as in the text, it is "even now to pay for the bride's hand in marriage" Giribala is hardly fourteen years when her father gives her in marriage to Aullchand who pretends to be well employed. But later turns out that Aullchand is a fraud. Not only a fraud but also a spineless creature who does not mind to sell-off his own daughters in the name of building a house and get drunk. However, his sweet talks convinced Giribala's parents and so thus "at the age of 14, Giri goes to keep house for her husband". In there, she sees the real picture of her husband's condition. She takes the household job at Babu's place and works hard as domestic help "for a meal wage." She knows that leaving her husband is not an option as "a girl's by fate discarded, lost if she's dead, lost if she's wed" . Later, Giribala gives birth to two girls and a boy within five years. A third daughter is born a few years later. When her daughter Bela is ten years old, Giribala starts thinking of arranging her marriage, but the drunkard and drug addict Aullchand sells Bela and their second daughter Pari into prostitution.

Following this, Giribala walks out with her youngest daughter Maruni in her arms; grasps the hand of her son Rajiv. However, the community criticizes Giribala for this valiant step, The news amazes everyone, sets their heads shaking in disapproval. What happened to Bela and Pari was common practice these days. But why leave your husband and go away? What kind of woman was that? Everyone is convinced that it's not Aullchand but Giribala who's at fault. An indescribable relief fills them, all of them, when they reach this conclusion .

These stories demonstrate the resistance of women, whether she is mother or daughter or wife or woman. Giribala left her husband with her only son and last daughter because other people will not think about her daughter anymore. Nobody will take any steps to protect her daughter as "nobody willing to give much thought to a girl-child. She, too, should not worry. She,too, is female" However, Giribala's story explains the materialize use of the female body in order to gain object.

Aullchand's daughters are not as precious to him as his desire to construct a house. His thought resembles the conventional view about women. His actions show a varied field of exploiting women's body. By selling them, he initiates a concept that these

women do not have any voice, any identity. These women are mass as products as they can be sold easily. Additionally, there is an incident where Giribala's husband Aullchand blames her to get an operation for not having any more babies. The blames comes towards Giribla because for Aullchand, "the more daughters you produce, the more money you acquire" and that suggests that Giribala does not have any right to her own body. Her reproductive body means a money source to her husband and by exploiting the body; he can earn more money to build houses.

On the other hand, Giribala resists and leaves her husband. She acquires a certain space within non-space society as her own. She rejects the social barriers and even overthrows the criticism of society because she feels that she needs to do that. She takes bold action to protect her only left a daughter and a son. She achieves an authoritive sense and power to lead her own life. She becomes the decision maker of her life. In this paper, I focused on the concept of female body as a site of resistance. One of Devi's stories "Giribala", Giribala leaves her husband to save her only one daughter and her only son. She abjects the society and bears her pain as her power of living.

MahaswetaDevi's stories are giving a voice to these voiceless marginalized women. Her stories are explaining the exploitation of female body as well as forming a resistance factor of female body The women protagonists in many of her works articulate her concerns and obvious displeasure with the prevailing establishment..However, they possess a voice in many forms but ultimate goal is to be heard which is done by Mahasweta Devi, wonderfully

References
1. Frames of Marginalisation in Mahasweta Devi's Outcast: Four Stories", 2008.
2. Devi, Mahasweta. Outcast: Four Stories, Trans. Sarmistha Duttagupta. Calcutta, 2002.
3. Guha, Ranajit. "Historiography of Colonial India", Marginalized Studies I.
4. Oxford University Press, 1982. Kriesteva, Julia. "Approaching Abjection", Power of Horror, Columbia University Press, NY, 1- 31, and 1982.
5. Sharma, Sadhana. "Mahasweta Devi's Outcast: Four Stories: The Subaltern do Speak".

REFORMED IMAGES OF SUBJUGATED AND MARGINALIZED WOMEN IN THE SELECT NOVELS OF SHOBHA DE

Mrs. B. Ajantha Parthasarathi,
M.A., M.Phil., MBA., SET.,
Assistant Professor of English, Sri SRNM College, Sattur

The Indian Novel in English in the pre-Independence period mostly remained male dominated for a very few women novelists such as Toru Dutt, Raj Lakshmi Debi, Krupabai Sathinadhan, Swarnkumari Ghosal and Cornelia Sorabji emerged at the end of the nineteenth century. But during the post – independence period there appeared a number of women writers on the literary scene like Kamala Markandaya, Ruth Prawer Jhabvala, Nayantara Sahgal, Anita Desai, Shashi Deshpande as well as younger generation of Githa Hariharan, Nina Sibal, Namita Gokhale, Shobha De, Suniti Namjoshi, Arundhati Roy and Kiran Desai (winner of Booker Prize for the The Inheritance of Loss, 2006), who contributed significantly to Indian English Novel and helped its development. Feminism, free – sex, alienation, identity crisis or an individual's struggle for freedom are some of the thematic concerns of these women writers. In their novels, the appearance of the new, fully awakened woman, ready to the fight against the patriarchal norms in order to live a meaningful life, is a recent phenomenon. The female characters created by these novelists do not accept the low secondary status in a male – dominated Indian society that is conservative. The central theme, therefore, is the emergence of 'new woman' in the fast changing social milieu.

Shobha De is a prolific and intelligent woman writer. She has emerged as a matured and conscious person through her writing, displaying a magnificent sweep of mind in her fiction. She is a dashing and courageous, best known as gelignite. The fictional world of De is typical, carved out by her, seldom observed in the writings of other novelists, whether male or female. De is not an idealist figuring out an ideal world but a realist in the wider sense who strives to present the world of experience glowing with burning issues, problem and concern. She is gifted with extra-ordinary ability to discuss very sensitive aspects of human life. The motif and vision are the basic aspects of a writer, in particular a novelist which inspires the journey of a writer. Bijay Kumar Das says,

A novelist is first and foremost an individual with a personal vision. At the same time he is a personality living in a particular period of time, in a particular place, in a

particular social environment. He is an individual and member of the society, and therefore society inevitably plays its part in his novel... Things and events depicted in the novel might not have happened to him, but he invents them as real to elicit readers' total participation. Shobha De precisely does that in her novels. Social concern is the main thrust of all her novels. (Das, Bijay Kumar 137)

The image of subjugated and marginalized woman is devoted to the portrayal of the imaged of subjugated and marginalized women in Shobha De's novels with an emphasis on men's pride, incompatible marriages, traditional norms of behaviour and patriarchal social system as the real forces of the oppression and exploitation of women. It is a fact that woman is victimized and subjugated by the male community everywhere. She has been the subordinated sex and has to conform to male standards. In most of her novels, Shobha De has focused on the marginalization of women in Indian society. She draws our attention to women's exploitation, discrimination and commoditisation. The women are treated with double standard. Subjugation and marginalization are the vital factors in their lives. They are never regarded as autonomous beings. De is anti – conventional in her attitude towards men. In her novels she primarily projects women and relegates men's status to secondary position. In a way her approach to the novel is against male – dominance and patriarchal male dominated society. Traditionally, man occupies central place in the Indian society and family organization. In this regard De says,

> In a society like ours to be born male is enough. A man does not need any other attributes. It's also a society that pampers male beyond reason. The gender equation has always been lop-sided. (Majumdar, Sudip)

De does not have perpetual hatred towards men; it is the characteristic attitudes and behaviour of men, which irritates her much. She continues, while commenting on status of male,

> For him the universe begins and ends in his belly – button. He is self – absorbed, narcissistic, feudal, hopelessly spoiled and completely infantile in his responses. (Majumdar, Sudip)

Her reaction against male is based on her ideologies she has explained in her novels. Most of the women protagonists regard man as tormentor, the person who attempts to deny freedom and expression of their personalities.

The subordination of women in a male-dominated culture is symptomatic of hierarchic gradation of socio – moral values connecting the sexes. In such kind of culture, a woman is thus reduced to a matter, a mere object. Karuna's treatment by her husband is subjected to his will and she is mere a passive object. Karuna develops a sarcastic approach to her problems in the patriarchal male culture, which apparently deconstructs the traditional gender hostility.

Karuna leads a life of emotional sterility. There is no communication between the partners, no smiles and laughter, no free exchange of thoughts and ideas, no queries and questions but silence. Silence sweeps the entire house. Karuna admits, "It wasn't that I never tried, but there was no question that my husband and I inhabited different planets" (SE 68). Despite these emotional differences in her married life, Karuna continued to lead the life of an ideal housewife respecting what the tradition demands. She does not protest anything but like a dutiful wife follows her husband. The house is kept in order; everything is well arranged, clean and tidy. Her husband is a compromising and forgiving type of person, who is not a cruel and merciless individual to abolish her for her sins, i.e. her affair with Krish,

> I've thought over the whole thing carefully. I would've thrown you right now – but I'm prepared to give you one more chance. I'm not a mean man. You've been a good wife – I'm prepared to cancel this one black mark on your performance record and start with a clean slate. But you have to swear you'll never see or keep in touch with that man again... you have sinned but I must be generous and forgive you. (Socialite Evenings, 184)

Dr S.P. Swain says,

> I would rather call this act of forgiveness on the part of her husband as an act of his male ego, his assertion of superiority. What right has he to say that 'I am not a mean man' when he himself has denied his wife the conjugal bliss of a marital life by often keeping himself at a distance from her? In what way is he 'fair' which he in the course of his tirade admits to be? He is unable to look deep into the physical needs of female self of Karuna. If she (Karuna) had any affair with Krish, it was only a means to fulfil her psychological and emotional needs. It was her attempt to attend wholeness of personality for without a man, a woman is fragment, a partial self. Such an involvement on the part of Karuna may also be a strategic escape from the claustrophobic and cloistered milieu of her marital life where they lived as two separate islands. Karuna is a respectable, conservative Hindu housewife, wrapped in yards and yards of sari. It is the role of a wife that restricts a woman's development and keeps in a world of confinement. (Swain, S.P., 129)

In Socialite Evenings Karuna play different roles at different times to fulfil her emotional and psychic thirst. She is a model, a housewife, a social lady and an actor – writer and a paramour. Marriage has enslaved her. It has been appropriately pointed out that,

> Socialite Evenings gives us the picture of marginalization of Indian women at the hands of their husbands. In a patriarchal male – dominated society, it is the

male who shouts, hurls abuse, bullies and reproaches, criticizes and it is the woman who listens, tolerates and remains passive. (Swain, S.P., 129)

Due to these unbearable situations Karuna faces now and then, she resents, resists and rejects male dominance where it is at its peak. Marriage comes to her as an affair, which is misrepresented by all its facets. Her psychic disturbances lead her to refuse marriage and prefer to create her own representation. In De's Sisters, male dominance and aggressiveness culminating in sheer oppression is one of the major concerns. One thing that may be pointed out here is that such kind of male superiority manifests where women appear subservient and weak. Mikki substantiates this opposition in the novel. Mikki places her faith in Binny Malhotra, even before marriage, hands over all the responsibility of business and capitals inherited from her father, loves him with a spiritual devotion and imagines a colourful world of happiness. Binny is chance seeker, a womanizer who avails the opportunity to exploit the dependency of Mikki and her emotional frustratins. Unaware of Binny's character or his schemes like a traditional Indian woman, she regards him in high esteem to her, Binny is like a God. She does not care who he sleeps with. What she receives in return is brutal treatment and oppression from the loved one. Having stored all her financial powers and resources to Binny, she is reduced to a lifeless toy in his hands. She admits,

> Trouble is, I love the man. Call me a doormat, a slave, a victim, anything. But, I feel hopeless and helpless. It is as if I've forgotten what pride is... or ever was. He can, and does, trample all over me. (Sisters, 119)

He expresses his antipathy by beating her several times and blames her of adultery. She is proclaimed as infidel and charged on false ground that she betrayed her husband by maintaining illicit relationship with a French cook Lucio. He drives her out, deprives her of her moral and lawful rights and makes her mentally weak by unending harassment. The last nail in the coffin comes in the form of notice for divorce petition, which put seventeen charges including adultery. But what got her was the one that said her marriage to Binny remained unconsummated and therefore the marriage stood annulled. Her movements have stopped, her self – identity is obliterated and forced to follow his orders. In a blazing display of his authority and self – willed power in the violent act, Binny warns,

> Listen very carefully, princess. This is no longer your father's home and you are no longer the pampered child. You are Binny Malhotra's wife. And you'd better start behaving like her. In our family women are trained to obey their husbands. Thank your stars you don't have a mother-in-law to please. You will never, I repeat, never question me... or complain. You have nothing to complain about – got that? Your life is perfect. You have everything... everything. Where I go, what I do, when and with whom is my business. I will spend as much time

with you as I choose to. There are social duties and obligations, which you will fulfil. If I feel it's necessary for you to travel with me for some purpose, it shall happen that way. If I have to attend parties on my own, it shall happen that way. Your job is to look beautiful. I told you that when I married you. Buy clothes. Buy jewellery go to the beauty parlour. Play bridge. Learn gold. Attend cooking classes. That's all. But, no questions – you don't have the right. And none of this cheeky business. I will not tolerate it. (Sisters, 116)

Mikki feebly tolerates all the brutality and torture by surrendering to the inhuman treatment meted out by her husband. It is only after Binny's death that Mikki regains her abandoned strength and identity. In Strange Obsession, the principal character, Amrita, refuses to be a toy in the hands of tradition where only man has pervasive control over women. Probably she also would like to break the myth that a woman should maintain her virginity and indirectly be the slave of a man who would marry her. She is one among the large number of women who come out of the margins to occupy the subject positions. She never wants to be a victim or commodity to be sold or bought. She does not want to be 'an evil counterfeit', 'a cursed pestilence', 'a weak vessel' or an 'incident being'. Amrita is destined to overcome oppression from a person of her own sex at a time when we seriously discuss marginalisation of women by men in a society which basically patriarchal.

The theme of male dominance streams in Second Thoughts also. Brought up under the influence of his mother a very traditional character in outlook and manner, Ranjan is also very conservative and traditional in his approach to life. He did his higher education abroad, settled down in Bombay and draws huge salary from the job as a bank executive. So far his family and wife is concerned he is indifferent and dominant in his attitude. Though highly educated, Ranjan does not seem to be liberal and considerate in his handling of family affairs. The traditional image of man nurtured in the traditional family finds its fullest expression in his character. While rebuilding his life, Ranjan says to his wife,

Since you are not a career woman, there's no reason why you shouldn't keep yourself busy looking after the house. It's not as if you have to go somewhere. You don't have any appointments to keep, like our neighbour, the Verma woman. She is a professional lady, a beautician. I wouldn't be surprised if she earns more than her husband. We don't need full – time domestics. Manage with part – timers. (Second Thoughts, 47)

Ranjan imposes insensible restrictions on his wife and does not permit her to give a free play to her voice ambitions and desires. In turn she accuses Ranjan of having her as a full time, domestic servant without pay, she threatens him that if she dares to inform his bank colleagues about having forbidden her from pursuing a career – even a

part time one. The restrictions put on his wife constraint her moment and curbs her mind; she is not allowed to go anywhere in the city freely; she is not permitted to purchase things or goods she likes and she cannot do the things she wishes to, she is denied the access to STD facility on phone. In fact it is kept locked, so that she could not avail it. Though rich, he is a niggard, scrooge in the matter of spending money and also emotions. He not only prohibits her from purchasing expensive Basmati Rice but even the ladies fingers. As in material life Maya is eliminated in her personal emotional life also. She failed to find fulfilment and belongingness in the company of her husband and her longing for adventure and romance remain unfulfilled. Ranjan is completely authoritative. Maya feels that may be his judgmental, supercilious attitude had a feeling of superiority over her and any lapses on her part receive strict premonition and threat: "There are certain rules. You have to abide by them whether you like it or not" (Second Thoughts 83). Maya finds self – realization and identity only when she meets Nikhil, a young vagabond student. Thus Second Thoughts brings out the basic weakness of arranged marriage in Indian society. Even though the woman is well educated, beautiful and talented she has no say in the family has to dance to the tunes of the whims of the powerful male. Maya expresses her desire after she experiences the heat of male dominance in these words,

> Maybe I wanted to see something of my choice. Maybe there were programmes out there that interested me. How come he didn't realize that? How come he didn't care? (Second Thoughts 282)

Shobha De is more interested in the predicaments of women. She presents the vital reality and makes us aware of the miseries of women and injustices done to them by their counterparts in the patriarchal society. However, it is an important fact that though De's novels are crowded with female characters, the analysis of the novels reveals her focus is only on the women protagonists, and the other secondary characters are simply mentioned. Furthermore, her novels move around only the metropolitan women whereas rural women do not find place in her novels. They are totally ignored.

Shobha De, restricts her characters to the urban area, ignoring the life of ordinary, illiterate and rural Indian women. As a staunch supporter and an ardent follower of feminism there is a bold and frank depiction of fair sex and feminine attitude in her works. Her novels are the protest novels against the male-dominated Indian society where women are denied the freedom of expression and action. Everywhere they are curbed by many man-made norms and factors victimizing and subjugating them in several ways. As a result of their oppression, exploitation and marginalization, they turn rebellious. In fact, through the depiction of warring pairs of women Shobha De brings out the psychological truth that woman is the enemy of the woman. Shobha De's

novels represent the new Indian woman's voice. A new woman is in search of self – identity, seeking liberation in all walks of life, replacing the traditional image of Indian woman. The need for women to seek their identity is the message in her novels. However, De also exposes the women's misunderstanding regarding their freedom and mocks at their way of asserting their individuality by posing to be men without concentrating on female empowerment as a whole. Her women protagonist fails to understand that their sexual freedom is being used and abused by men. The novelist also suggests that, whenever women, whether circumstantially or ambitiously disregard morality, they cannot escape disaster and consequent suffering.

Though Shobha De has presented women who indulge in free sex, live fashionable and wealthy life, she in no way seems to support the way of life adopted by these so called modern women. On the contrary, she shows her contempt and dislike for their unethical and socially unacceptable behaviour. This can be deduced from the ultimate fate her heroines are condemned to as a result of their indulgence in unusual activities and deviant behaviour. In fact, Shobha De advises her women to analyse their behaviour and stop posing to be men. Finally, though her novels are criticized for pornographic element, De is definitely a writer with a purpose.

References
Primary Source
1. De, Shobha. (1989) Socialite Evenings. India: Penguin Books.
2. De, Shobha. (1992) Sisters. India: Penguin Books.
3. De, Shobha. (1992) Strange Obsession. India: Penguin Books.
4. De, Shobha. (1996) Second Thoughts. India: Penguin Books.

Secondary Source
1. Das, Bijay Kumar. (1995) Indian Women Novelists: Set III: Vol 1, R.K. Dhawan (Shobha De's Sisters: An Appraisal). New Delhi: Prestige Books, 137.
2. Majumdar, Sudip: Interview – Newsweek, 3rd March 1997
3. Swain, S.P. (2000) Feminist English literature: Shobha De's Socialite Evenings A Feminist Study. New Delhi: Prestige Books, 129.

EMERGENCE OF FEMALE PROTAGONISTS AS NEW WOMEN IN MANJU KAPUR'S DIFFICULT *DAUGHTERS* AND *HOME*

Mrs.S.Selvapriya, M.A., M.Phil
Assitant Professor, Nadar Saraswathi College of Arts and Science

Abstract

The present paper is an attempt to explore how the female characters of Manju Kapur become rebellious against their age old family conventions and emerge as new women through their education with reference to the novels Difficult Daughters and Home. In both the novels, Manju Kapur has explored the psyche of contemporary, educated women, who belong to the families that strictly follow conventional ideals without having a bit of compromise, yet torn between the ancient conventions and modernity, they establish their self-assertion with their education and strong-will.

Keywords: *Identity, Emergence, Education, Marriage, Conventions, Tradition, Modernity, Independence*

Manju Kapur in almost all her novels portrays the male-chauvinist scenario ever faced by women. Her novels primarily deal with the education of women which she believes gives real emancipation to the female-folk. In her novels the protagonist would have been shaped as equal being to men in each and every regard and they usually make their choices themselves. We could see the prevailing thought of marital bliss and women's role at home is central focus which leads to the emergence of the female protagonists. This sort of emergence is not only fostered by Manju Kapur, but by today's all Indian female novelists, and hence their works have secured international recognition that declares that the Indian female writers' works are not merely disparaging melodrama based on Indian sensibility.

The women of Manju Kapur's novels ever try to ascertain their self identity amidst the sufferings and suffocations that they need to tackle in their conventional confines of marriage and family, and such struggles are vividly delineated by the novelist. Two novels of Manju Kapur with respective idea are taken as instance in this paper are *Difficult Daughters* and *Home*. In either of these novels, two types of Indian women are portrayed.

The women belong to first type are determinedly stick on to the conventional age old ideals, where they firmly believe that life is unaccomplished without marriage followed with children by default. Such example women are Kasturi and Ganga in *Difficult Daughters*; and Sona, Asha and Sushila in *Home*. In contrary to these female-folk's ideals, the other type of women such as Virmati, Shakuntala and Swarnalata in

Difficult Daughters and Nisha and Rupa in *Home* are with the traits of challenging the conventional norms set for Indian women.

Virmati's mother Kasturi's ever pregnant scenario leads Virmati to be a substitute for Kasturi in her housekeeping and other culinary skills, whereas Virmati wishes to be educated and to emerge as a new woman. As a means of obeying traditional values, Virmati too is expected to admit for arranged marriage without further interrogations like many other Indian girls. Unexpectedly, she refuses her wedding arrangements to proceed with her studies.

This daring assertion of marriage refusal with Inderjit disappoints everybody in the family. According to them, Virmati has humiliated the family's name and fame, and has ruined her sisters' chances of marriage. Hence, her quest for proving her individuality gets critical, and the male supremacy of her patriarchal society put hurdles to her right of taking decisions on her own. In the novel, there is a constant struggle between traditional approach of Kasturi and modern views of Virmati.

The protagonists of Manju Kapur are the representatives of women-folk ever trying to emerge as new women by carrying the burden of obstacles since ages and want to be emancipated now. The novelist clearly shows the perplexity of women who hold the aching of being female furthermore with the additional task of being mothers of their own sex. In the conventional social ambience, where the mothers and daughters are present, marriage is considered as the definitive goal and fortune from that tangle these women cannot run away.

Virmat's cousin Shakuntala thinks beyond being merely a house wife, according to her, marriage is the worn-out province. She has been quite determined with her choices and is clearly aware about her duties. Hence for her widened feministic thoughts and modernity, is ignored by the family, and she is complaint at of her bold decision and behaviour. Virmati is much interested on the exclusive lifestyle of Shakuntala, and their discussion is always about women's education and respective freedom. Shakuntala's frequent visits plant the seeds of aspiration within Virmati that it is possible to be something other than a wife.

"These people don" t really understand Viru, how much satisfaction there can be inleading your own life, in being independent. Here we are fighting for the freedom of the nation, but women are still supposed to marry, and nothing else." (Difficult Daughters, p.17). During her higher education at Lahore, Virmati is exposed to Swarnalata, an activist who takes part in Freedom struggle movement and tries to establish the role of women in freedom fighting. She is a female being of her own views and opinions and a sole female who gets out of life that she wants, without any negotiation in her compromises. Swarnalata has political concerns and she becomes a powerful figure in the nationalist movement. She participates in the political activities

like organising women's meeting. While Virmati has been in her dilemmatic circumstances of getting married with the professor as early as possible, Swarnalata advises her,

> "Marriage is not the only thing in life: there are other important things for women to do". "The war – the satyagrah movement-because of these things, women are coming out of their homes. Taking jobs, fighting, and going to jail. Wake up from your stale dreams." (Difficult Daughters, p.151)

A few women either in pre-independence and contemporary Indian society are much conscious of the fact that the subservient position has supposed been enforced on them, but not really a pre-destined thing. Such women are trying to emancipate themselves from such sorts of subordination.

In this world which is rapidly progressing, those women are rejuvenating their respective place. They revolt against their abuse, discrimination and marginalization. They are interested in remoulding themselves in a more humanistic shape; accentuate thereby the need for a scrupulous re-examination into the male-female relationship on the grounds of mutual love and respect.

Manju Kapur's Home has explored into the intricate architecture of the Indian joint family, which depicts so many queries that are knitted within the family- quest for identity, the rebel against the olden traditions, the problems of marriage, and women's struggle for her self-survival. The novel vividly shows that apart from the manacles of gender, tradition and conventions of religion, women are still too the victims of mental and sexual harassment, dowry homicide etc.

The protagonist, Nisha leads her life in the manacles of responsibilities. Manju Kapur has not only explored the pathetic plight of women in joint family, but also their sacrifices for the family. This novel is of the quest for identity of three women, particularly the protagonist Nisha, who revolt against her conventional family that never accepts the new idea by giving up their older values.

Two other females are the sisters Rupa and Sona, have contrary perpectives about women's education and profession. Sona, Nisha's mother is an embodiment of ancient values who believes only on the subservient duties devoted to the family. Sona believes marriage is the sole objective for her daughter, and thus she expects her daughter too on Sona's own track regarding the devotion to family. She believes the mythical ideas that people are suspicious of brides who are much educated.

Whereas Rupa's perception is that girls must be educated to become independent. Proving this, Rupa does gravely convince her sister, Sona to send Nisha to DBC College with a safer zone entity that the college is women's college and a good place for any girl to acquire value in marriage market.

Nisha is sent to the college thereby, but not to secure good education but for timepass till she gets married. Nisha is exposed to the outside world as she enters the college. In college, she benchmarks herself with her classmates and wants to be like them. On her way to college during bus travelling, Nisha falls in love with a boy named Suresh. He is a student of nearby Khalsa College of Engineering. Nisha starts boldly wandering here and there; roaming on the university lawns with Suresh. The progress in her affair leads her to be self assertive which is reflected in her costumes and hairstyle transformations. She knows very well that her family bounded with age old conventions will not accept her marrying Suresh, yet she is much determined with her choice of marrying him.

> "It greeted her as she walked through the front door. Who gave you permission to cut your hair, suddenly you have become so independent, you decide things on your own, where did you find the money, the time, the beauty parlour, where did you find all these things?"(Home, p. 149-150)

When her family finds out Nisha's affair, her challenges are begun to be faced. Among them, the worst scenario is she is literally made an isolated and alienated prisoner in her own house. Meanwhile Nisha's marriage is arranged by the family which she objects as if violating the norms of her family that the marriage arranged by the elders should be accepted by the young women.

The novel Home has very well exposed the fact that a girl in Indian family has no right on her own to decide about her life; she has to sacrifice all her desires for the sake of her family. Nisha, the educated girl though not successful in her love affair, she is never fed up with her struggles, and thereby she decides to establish her self-identity as an accomplished woman entrepreneur.

> "She had paid half the twenty-five thousand loan. With your blessings, papaji, you will get the other half by next year, she laughed, almost recapturing the liveliness that had been hers in college." (Home, p. 295)

Nisha's mother Sona has been ever conscious about her marriage. Only for this reason, she has supported the business life of Nisha. Thus, Nisha becomes a wife of a widower who has been arranged by her family. Family has to compromise because of Nisha's fate, otherwise they do not agree at all. Nisha is born and brought up yet in a metropolitan Indian middle-class family, she has struggled a lot to build herself independent identity.

She could have easily followed the convention and lived happily. But she has been determined to show her skill and ability to work equally with the men of her family. Finally her desire to be financially independent and her mother's wish of getting her married both have been accomplished.

After having done a detailed analysis over Manju Kapur's novels *Difficult Daughters* and *Home*, it could vividly be interpreted that Manju Kapur is quite obviously interested to portray the struggles and challenges faced by the women who try to deviate from age old conventional ideals of Indian families and the novelist is delighted to present such female-folk emerged as new women. Particularly, such emergence is essentially happening based on acquiring identity through the education of women. The education has led the female characters of Manju Kapur to be independent and emerged as new women.

References
1. Kapur, Manju. *Difficult Daughters* Faber and Faber Ltd 2010
2. Kapur, Manju. *Home* Random House India 2012

PERIYAR'S WHY WERE WOMEN ENSLAVED?: LIBERATION OF INDIAN WOMEN

T.Malavika Pavithira
Ph. D Scholar, MannarThirumalai Naicker College, Pasumalai, Madurai

Abstract
    The title 'Periyar' was given to honor the reformative activities of E.V.Ramasamy by the Tamil Nadu Women's congress conference held at Chennai on 1938. Among his various social reformative activities, he prioritized Women's elevation. Women, who form one half of world's population and stand as the reason for the birth of people, are enslaved in the name of chastity, love, prostitution, widowhood and are denied of inheritance. For their rational growth and self-respect, Periyar wrote a poignant thought evocative book, 'Why were women enslaved?' to remove the barriers and enable women freedom and independent living, by pinpointing their pitiable state and bringing about an upturned revolution.
Key concepts: Periyar feminism, Self-respect movement
Key words: Women's rights, Women's liberation

Periyar (E.V.Ramasamy 1879-1973) is popularly known for rationality, rebelliousness against superstitions, awakening of the ignorant people with revolutionary ideas, bloodless evolution, insistence of education for all, women's liberation, atheism, installing self-confidence in each and every one, voice against unsociability, movement of self-reliance, welfare of laborers, vision and mission on future generation, Dravidian views and so on.

This modern society is greatly indebted to him, on account of his effort for social reformation. Though he lived in the period of struggle for independence his long term vision bothered only about after independence. His views were only on sharpening of our society after independence. Periyar's approach, ideologies and thoughts do not come under any other school of thoughts and they carry a stamp of their own and hence it is inevitable to have a new classification as Periyar Feminism which is a revolution in the history of India. The old adage says: 'Charity begins at home' but Periyar's principle proclaims, "Equality should start from our home for womenfolk and that too not by their traditional male masters but by their own independent, revolutionary women groups, who have nothing to lose but their chains". He had spent more than five decades of his life to awaken the people to their want of education, faith in superstition, deception and exploitation to which they are subjected. He used all his material, mental and moral recourses in the service of the people particularly women's liberation.

The ideological fight against the old age theories of religion was started parallel to the social demands by Periyar. Periyar questioned each and every condition imposed on women. He criticized the life of

"A women who was dependent on her husband for two square meal and a pair of clothes and shelter. In return the women should work at home from morning till night serving the husband at most obedience, bearing his tortures and still worshipping him as her god, giving birth to his children and remaining chaste and loyal to him". Periyar was the only man who questioned this life and asked, "why should a women endure this humiliation?" Periyar rejected the 'glory' attached to the sacrifices of women for the sake of husband. He rejected the stories portraying women in the light of 'glory' for her loyalty to her husband and he called the women to come out of those images and role models. The stories of stereotype women are molding the women as proud slaves to her husband were the subject of enquiry by Periyar. The greatness attached to such women characters was criticized by Periyar as 'stupidity'.

Why Were Women Enslaved? is the translated version of *Penn Yean Adimai Aanal?* written by Thanthai Periyar (E.V.Ramasamy) done by Meena Kandasamy. The ten chapters of this book is the collection of articles were published in the journal **Kudiarasu** have been written mainly to reveal the reasons; why women were enslaved?, why they became slaves?, why they continue to be slaves?, and how they (women) can break the shackles of their slavery to live as independent people? and explain the solutions to get rid of it to proceed the eradication.

Why should there be any difference between the rights of men and the rights of women? asked Periyar. He also define the rights, what are all the rights for men are same for women. This society stereotypically framed masculinity is enclosed with bravery, strength, anger, leadership and femininity with love, sublimity, calmness and caring. This is nothing else but saying that bravery, force, leadership and anger belong to the tiger and calmness, silence, caring and love belong to the goat. The women's rights that Periyar demand is that men should accept that women also posses the qualities such as bravery, strength, anger, leadership like men. He added that both the sexes should have all the qualities mentioned above; only that would lead to the development of human society. There is provision in nature for both the sexes to be equal. But it had been changed artificially because of men's selfishness and conspiracy. If there is true love, it is possible for both the sexes will do everything in the same manner expect child bearing. Anything else that is selfish and stupid is not love.

The English word 'chastity' means 'virginity'. If we understood in this context, it has been defined for either men or women, but it has been defined commonly for the human race to denote 'state of absolute purity devoid of any sex'. So, chastity is not related to women alone; it can also be taken to mean that once a woman/man has had

sex, she/he has lost chastity, irrespective of their subsequent purity. In the Indo-Aryan language Sanskrit alone defined chastity as *pativrata* (loyal wifehood). Here only the concept of slavery was introduced into the word chastity. The tem *pativrata* clearly denotes slavery not only because it has been given the meanings "she who considers her *pati* (husband) as god, she who considers it a *vrata* (vow) to be her husband's slave, she who doesn't take into account anyone other than he husband"; but also because the word *pati* means authority, master and leader. The evenly matched words *nayakan – nayaki* and *thalaivan – thalaivi* are used to denote the phases of love and desire, where as the state of chastity is linked only to women who are asked to consider their husband as lord and master. The words *husband* and *wife, masculinity* and *femininity* denote the concept superiority and inferiority.

According to Periyar, men becoming fools by thinking that chastity doesn't apply to them. Male domination is the only reason why the word to denote that men have chastity has been hidden from our languages. If women really want freedom, the concept of chastity that deals a different justice to each sex must be destroyed and an equal, self-governing concept of chastity for both the sexes must come into place. Forced marriages, where people are tied to loveless places for chastity's sake must be destroyed. Cruel religions and laws, which dictate women to bear with the husband's beastly action for the sake of chastity, must be destroyed.

The word prostitution is mostly used in the context of sex between man and woman. Even if public hears of his news, they will only curse and blame the woman and will mostly not blame the man to be prostitute. Moreover, such words of blame, abuses, curses and usages do not exist for men. There is no custom for calling a man a male-prostitute. Even if he is blamed in that manner, he doesn't get angry. Periyar felt that the word 'prostitute' merely signified that the women are nothing but slaves. This is because the 'sin of prostitution' and 'immorality arising out of prostitution' are applied only to women and never to men. If prostitution is going to be an obstacle to the efforts undertaken for women's freedom and women's liberation, it is the duty of the truly persevering persons to daringly cast it away and move forward.

In our country, we have several restrictions: once a woman becomes a man's wife, she has no freedom until her death; her husband can marry several women and live with them in her presence. If she is in her husband's home while they have misunderstandings, the wife can only demand food from her husband, she doesn't have the right to compel him to satisfy her sexual desires. The social cruelty that for the sake of chastity one should hide the real love and affection arising in one's heart and live with a man for whom one feel no love for affection should be shattered.

There are number of news- items appearing in the papers that in the southern country, husbands have killed their wives on grounds of suspicion. Anybody

entrenched in godliness lacks the intelligence to think of why a marriage that is supposedly divine, ends in this manner. So Periyar condemned the state of divinity in the relationships such as love and marriage. It is highly important to make space for the annulment in marriages so that women are emancipated and acquire human nature, human rights and self-respect, and men should acquire satisfaction, pleasure, true love and morality. Until this happens, there will be no space for real pleasure and an independent life for men and women. Periyar passed a resolution in the Chengalpet Self Respect Conference and Chennai Self Respect Conference that men and women should have the right to free themselves from marriage. After that the laws for the annulment of marriage have been introduced legally in India and abroad.

"Can a man remarry when he already has a wife?"(Kudiarasu,12.10.1930) asked Periyar. Periyar consider marriage to be a contact arranged for the sake of convenience of the marring couple. He also feels that the autonomy of both of them shouldn't be controlled by any tenets. Remarriage hasn't been prevented anywhere in the world in the name of natural desire, or disciplinary policy, or as per the religion followed by Tamils. And remarriage is not being banned by law made in relation to marriage or by any religious doctrines. There is provision to marry up to 60,000 women in Hinduism, up to four women in Islam and any number of women in Christianity. In Christianity alone, one can remarry after annulling the current marriage under certain conditions. There were no rights for women to have more than one husband. The annulment of marriage is one of the doctrines of the Self Respect Movement. A resolution was passed in the Chengalpet Conference in support of this and another resolution seeking promulgation of law for annulment of marriage was passed in the Erode Conference. Therefore, it is settled that a married couple have the right to separate and get separated: the husband from the wife, or the wife from the husband. Periyar felt the real freedom will come into existence for women only when women also possess what men possess, when they can also behave like him, when they to have the rights and comforts as men in worldly life, society, laws and religion. Only then they can attain real satisfaction, pleasure and love.

"Will rats be liberated by the efforts of cats? Will goats and cocks be liberated by of foxes? …. If one thinks over these questions, one can realize the truth. Even if the liberation is somehow attained in these above cases, one can firmly believe that women will never liberation because of men". (Kudiarasu, 12.08.1928)

Periyar asked women shouldn't forget the fact that the word 'masculinity' is itself internationally used in a manner to demeaning women and women should remember that as long as 'masculinity' exists in the world, 'femininity' wouldn't be respected and the enslavement of women of women will keep increasing. Periyar strongly believed

that, "unless women destroy the concept of 'masculinity', it is certain that they will not attain liberation". (Kudiarasu, 12.08.1928)

Periyar felt that women remain to be great barriers of women's liberation than men. This is because women fail to think that that they are capable of having complete freedom like men. Hindu religion says that women should be under the control of father in childhood and under the control of her husband in her their physical characteristics are an indication that God has youth and their children in their old age. So they made them to think as the slaves of men. If women and men look at it from neutral perspective they will understand that women were made slaves because of the masculinity of men. It is not wonder that the male written 'his'tory were portrait women in such manner. It's time for 'her'story to reveal the sufferings and oppression of women by the men boldly. The true liberation of women is only in the hands of women. Women should work together to claim their own rights against typical and conventional society.

References

1. Primary source: Kandaswamy, Meena, (trans).E.V.Ramaswamy's *Why were women enslaved?*. Chennai: The Periyar Self-Respect Propaganda Institution, Chennai, 2016
2. Secondary sources: Dr.K.Veeramani, foreword, *Why were women enslaved?*. Thanthai Periyar, Translation by Meena Kandasamy, Pg vii
3. Dr.K.Veeramani, complied and edited, *Periyar Feminism*. Periyar Maniammai University, Thanjavur, 2010

BLACK WOMEN LIBERATION THROUGH 'SISTERHOOD' IN *COLOR PURPLE*

Dr. R. Dhanalakshmi
Assistant Professor of English,
MannarThirumalaiNaicker College, Madurai

M.Lekha
PhD Scholar Mannar Thirumalai Naicker College,
Pasumalai, Madurai

Abstract

Alice Walker in her novel the Color Purple, emphasized on the empowerment of women and how the black women are struggling throughout their lives and atlast they are achieving success to shine in their lives. Walker strives to propose the liberation of black women in their culture and society. This novel reflects about the history of oppression and sexual abuse that are undergone by a southern black woman (Celie) under the hands of black men. But this character like the other female characters Sofia and Shug Avery evolves as an independent and strong woman without the support of men in the end of the novel.

Key concepts: *Feminism, Black feminism and Womanism.*
Key words: *Sisterhood, Marriage, Society and Family.*

Feminist literary criticism is the literary criticism formed by feminist theory or more broadly by the politics of feminism. It uses feminist principles and ideologies to critique the language of literature. This school of thought seeks to analyze and describe the ways in which literature portrays the narrative of male domination by exploring the economic, political, social and psychological forces embedded within literature. "Feminism is any form of oppression to any form of social personal or economic discrimination which women suffer because of their sex" (David Boucher- the feminist challenge) Feminism is both theory and practice, a framework that continues in our life , its purpose is to understand women's oppression so that we might end it. In literature, feminism is an very important area of approach nowadays. Because most of the contemporary writers deal with feminism in their works. The novel starts from Celie's resistance to the oppression surrounding her, and the liberation of her existence through positive and supportive relations with other women. Christian noted that perhaps even more than Walker's other works (The Color Purple), especially affirms that "the most abused of the abused can transform herself. It had completed the cycle that the walker has announced a decade ago: the survival and liberation of black women through the strength and wisdom of others". The novel has won both the Pulitzer Prize and the American Book Award, and it was made into popular motion picture which received several academy award nominations.

But simultaneously it has been brought into a big controversy for being "degrading to black men and promoting lesbianism among black women, critics have commented that the messages of her books transcend both race and gender. According to Gloria Steinem in Ms. Walker "comes at universality through the path of an African black woman's experience… She speaks female experience more powerfully for being able to pursue it across boundaries of race and class. Jeane Fox – Alston in the Chicago tribune book world called Walker "a provocative writer who writes about blacks in particular but all humanity in general. Walker's epistolary novel '*The Color Purple*' depicts African – American women in the early 20th century striving to realize selfhood. Focusing on her protagonist's development, Walker shows Celie's progression from a sexually abused child to a less passive spouse and to an outspoken equal partner. Ultimately Celie finds her inner strength through the influence and support of women around her.

The Color Purple is an Womanist novel as it focus on the bonding of women. The female relationships develop a community of women around them. Sofia extends a helping hand to Squeak, her husband's mistress. Nettie became the stepmother to Celie's children, ensuring that they will reunite with their mother. Liberated Shug acts as the moral compass that carefully guides Celie into a brave new world. Shug and Celie take Squeak with them to Tenesssee to begin a new life. They formed a sisterhood and tend to each other's needs. They are the masters of their own liberty, and not the recipients of perceived liberties granted to them by men. Their dedication to each other supports and sustains them till the end.

Dramatizing the capacity for growth and redemption that comes from both self expression and female bonding, Walker creates several characters who follows their unique towards personal fulfillment, guides Celie to explore and honor her own. Thus it eventually moves from being ashamed and silenced to live in proud and in full possession of her voice. ' Whenever there's a man, there's a trouble.'

Black feminism is a school of thought which argues that sexism, class oppression, gender identity and racism are inextricably bound together. Feminism at its core is a movement to abolish the inequalities that the women face. The Combahee River Collective in 1974 argued that the liberation of black women entails freedom for all people, since it would require the end of racism, sexism and class oppression. It became popular in 1960s in response to the sexism of the civil rights movement and the racism of the feminist movement. From the 1970s to 1980s black feminists formed various groups which addressed the role of black women in Black Nationalism, Gay Liberation and Second Wave Feminism. Proponents of Black feminism argues that black women are positioned within the structures of power in fundamentally different ways white women. Critics of Black feminism argues that racial divisions weaken the strength of

overall feminist movement. Among the theories that evolved out of the black feminist movement. Among the theories that evolved out of the black feminist movement are Alice Walker's Womanism and Historical Revisionism with an increased focus on black women. Angela Davis, Bell Hooks, Kimbele Williams Crenshaw and Patricia Hill Collins have emerged as a leading academics on Black feminism, whereas black celebrities notably Beyonce have encouraged mainstream discussion of black feminism.

Alice walker described to African American critic Mary Helen Washington in 1973 three types of African American characters excluded from the literature of the united states: physically and emotionally exploited women who lead narrow and confining lives and are often driven to insanity, psychologically exploited women who endure cultural alienation, and surviving women who achieve wholeness out of oppression and prepare spaces for other oppressed communities. Walker is the first African American woman writer to win the Pulitzer Prize for novel. *The Color Purple* explores the issues of spousal abuse, incest, lesbianism, subjugation and dehumanization. Walker's protagonist Celie writes to God, Nettie to her sister Celie, and Celie to Nettie. The letters reveal the injustices women incur from men in the United States and in Africa. This novel chronicles Celie's growth from a dependent, defeated personality to an independent, liberated woman with purpose and drive.

Alice walker gives the reader some of the first two and all of the third in *The Color Purple*, a novel about womanhood and the awakening of consciousness and spirit (Washington, "An Essay on Alice Walker").

Walker has brought into light the problems faced by African- American women and has tried to find answers to these burning issues racism and sexism. She has advocated that every woman should celebrate her womanhood. She would be able to love and appreciate her own personality. So black woman's literature is a movement in to self- love, self- respect and self- determination. *Color Purple* tells the story of Celie, a battered black woman, who stands against the oppression to finally emerge as triumphant over a world which marginalizes her. Shug, who refuses to be defeated by racism of whites and sexism within her black community helps for the growth and liberation of the protagonist, Celie. It is her love for Shug and her love of self enables to bury her sad origins and construct a new domain.

In this novel *The Color Purple,* Walker tries to portray the individualistic identity of women through the characters like Celie, Shug Avery, Sofia, Mary Agnes and Nettie. Celie the abusive and innocent women subjugates herself under men like her step father and rude husband Albert. She is raped by her step father continuously without any humanity and also she is married to a widower with his uncouth children. She has to maintain his household and bring up his children. She is beaten up to the extreme level which results as Harpo to behave like his father who tries to impose his

authority upon his wife. But he ultimately fails in his effort since his wife Sofia is so stubborn and refuses to submit herself against his oppression. She fights back and hits him. She is a rebellious woman who wants to maintain her identity throughout her life. She boldly goes out from Harpo's house with her children in order to restore her identity. She even slaps a white mayor who asks her to be a servant maid for his wife and to maintain their children. Because She maintains her children neatly.

Celie though initially subjugates herself but finally restores her identity with the support of other women in her life. Likewise Shug Avery is a very much interesting character. She is the one who supports Celie from the beginning and she also helps her to discover Nettie's letters that are hidden secretly by Albert for several years. Celie is supported by Shug in all ways and even economically she is supported by running a separate business of making pants. Thus Celie finally established her identity by standing in her own legs without the support of Albert. Likewise Nettie, her only sister always stand against the patriarchal norms imposed on her in her childhood. She goes out from Albert's house since he tries to rape her and joins with the African missionaries and lives a different life not like Celie.

In the novel *Color Purple,* Sexual harassment plays a vital role because the black women are sexually abused for without any reason. All the characters Celie, Nettie, Sofia, Mary Agnes(Squeak), Anne Julia are sexually tortured and they are used only for deriving ultimate sexual pleasure that the black men can derive from them. Celie is the most pathetic character among other women in the novel because she is raped by her step father without any mercy. She cannot reveal it to anybody other than God. Her sufferings are unimaginable for everyone. She starts to write letters thereafter to Him about her traumatic condition and pathetic situation in her life and only after that she knows her only sister Nettie is alive and then she writes to her about each and every incident in her life. These characters in their life have been sexually misused and they are not even treated as humans itself. Likewise Mary Agnes is raped by her own uncle who is a jail warden, unexpectedly she is trapped by him when she asks him to relieve Sophia from prison. Thus black women does not even know the forthcoming events in their life. They are forcefully dragged in sexual activity without their own likes and dislikes.

Representation of black women in family relationships is also an important theme in Alice Walker's Color purple. They are portrayed as typical mother, wife, daughter and grandmother and consequently they have connection only within their family. Their wishes, likes and dislikes are not even taken in to consideration by men. They are totally confined within their house. They are used as mere servants, slaves and servants and hard labourers and treated as mechanical objects to derive sexual pleasure whenever the men needs to have it. Here Celie, the protagonist of the novel is

just used as a slave and servant by her husband and she is even married to him only for maintaining his dirty children. She is cruelly beaten up by him for no reason. According to them, black women are deserved for it. And they are treated as a child producing machine to bear a child. Family planning and birth control are unknown terms for them. The black women are portrayed as much stereotypic.

Empowerment of women is a highly challenging notion and it cannot be achieved without full co- operation. In this particular novel, all the female characters struggle to achieve liberation in many ways but only with the support of other women they are realizing their own identity and come to identify their real status in society and their family. As Celie is supported and encouraged by Shug Avery and she is the one who helps her to like and love herself and she encourages her to relieve herself physically and mentally from the tortures imposed upon her by Albert. As her female characters are empowering to get the particular status, they are struggling to find their real identity, because of the patriarchal norms and notions inclined upon them.

Black men does not allow them to exhibit their identity because they subjugate them from the beginning itself. As Alphonso, Celie's step father says that they are deserved to get abused and oppressed. He never allows Celie to talk with anyother men, except him. But naturally Celie does not like men because the only man she has known is Alphonso who is so cruel and she has always shown her attachment towards women. Ultimately she gets attracted towards Shug Avery. She does not like Celie in the beginning but after seeing the physical sufferings imposed on Celie by her husband Albert, She helps her to escape from it, and even educates her about love, sex and God. Shug is the very important character in the novel. Because she helps Celie to improve herself mentally and to identify herself among others. Atlast Celie stands independently by running her own business of making 'pants'. Thus Celie finds her real identity in the context of patriarchal society.

Black feminist and Womanist thought are committed to the liberation of black women and women of color from the oppressors of race, class and gender. One of the theories evolved out of the black feminist's movement is Alice Walker's Womanism. Alice Walker in the preface to her collection of essays- *In Search of Our Mother's Garden:* Womanist prose gives a detailed definition of the new term. Walker stresses that a womanist is not a separatist; she makes connections where they exist. She stresses that womanist is not a separatist; she makes connections where they exist. She stresses that womanist loves other women, sexually and or/ sexually; but that sexual preference is not an essential part of her definition. Instead what is essential is that she has to love herself.

African American Womanism is characterized by female bonding and seeks to raise awareness on the plight of women who struggle to co- exist in a man's world where

they are considered as appendages. Black women encourage serious and mutual commitment between black women in order to heal the wounds related to oppression through race, class and patriarchal constraint. Obioma Nnaemake states, "women appropriate and refashion oppressive spaces through friendship, sisterhood and solidarity and in the process reinvent themselves"(19).

The feeling off solidarity usually urges every women to call each other 'sister' in the African American community and this group- oriented view represents a good opportunity for black women to form strong bonds. This bonding helps them build and strengthen their self- esteem. These women friends can share stories, support each other, or just sit down to talk. The term 'Sisterhood' is used among feminists to express the connection of women who are not biologically related but are bonded in solidarity. Robin Morgan edited a 1970 anthology called 'Sisterhood is powerful' that gathered writings from dozens of feminists. This sisterhood emphasized collective struggle, activism and feminist theory. The bond of sisterhood in *Color Purple* is noted as "A sister is a gift to the heart, a friend to the spirit, a golden thread to the meaning of life," says modern day writer Isadora James- in her book *My Sister, My Friend.* In this particular novel, relationships among women represent a symbol of hope in a world filled with male violence. It is through this bond of sisterhood only they can experience love, acceptance, spiritual guidance and support against a very cruel and oppressive life.

Walker's fiction confronts issues like racism, intra- racism, sexism, neo- colonialism and imperialism in order to transform both society and individual. This novel portrays Celie's growth from childhood to maturity which is interrupted by the abuse of her step father and later by her husband. Shug's presence and later her friendship enable this process of maturity.

According to Amy Sickels, Shug's presence is important in Celie's life since, Shug helps Celie to see that there are different ways of living and thinking, helping Celie moves closer to her own liberation and independence. The conversation about god challenges Celie's spirituality and she begins to be more aware of beauty around her. Celie depends on Shug for love, security and support. But later on she begins to depend on herself and starts to recreate her own place in life.

Brenda R. Smith, a critic, observes that Nettie's letters are important because they ultimately lead Celie to a new level of spiritual awareness. Then Celie regains her identity and addresses her letters to Nettie with her name signed on them. Dinitia Smith and Tuzyline Jita Allan indicates that Celie's new found sense of self, one who fights against abuse and degradation is encouraged by her relationship with Shug, Sofia, Mary Agnes and eventually Nettie.

This community of female friends helps her to realize that she is much more worthy than the degraded image which Albert constructs for her. Each of these friendships in *The Color Purple* forms a part of a larger net of communal relationships in which female friendships is the dominate one.

According to literary critic Mae G. Henderson, these friendships challenge the hierarchal power relations between men and women. Henderson observes,

[…] the relationships among the women based on cooperation and mutuality. Women share the children, the labor,.. ultimately it is the female bonding which restores the women to a sense of completeness and independence. The relationship between Celie and Shug, Celie and Sophia on one hand and between Celie and Nettie, and also between Celie, Shug and Mary Agnes on the other hand exemplifies the power and potential of this bonding.

The values expressed in women's friendships like respect and unconditional love become guiding rules that shape the new community created by women in *The Color Purple*. Walker creates a community of women friends which fits Aesop's famous saying: 'United we stand, divided we fall'.

The Color Purple presents a modern family structure instead of traditional one. Celie and Albert's marriage is of master and slave one; Harpo and Sofia's marriage begins initially as a good one but falls apart each other because of Harpo's attempt to control Sofia by using violence. Friendship among women helps to transform the families from traditionally conservative in to a healthy and extended family. In the end all the characters live happily together, Nettie returns with her husband and Celie's children to live with Celie and Shug.

Harpo and Sofia lives with their children. Albert moves very friendly with everyone, and Celie emerges as a whole and independent being after several years of oppression.

Color purple celebrates love, friendship, sisterhood where the female characters find love with each other, whether they are sisters, friends or enemies. This entire study explores the positiveness of sisterhood and female relationships through the novel *Color Purple*.

This entire study shows the journey of black women from self- hatred to self- love which helps them to liberate themselves from the men, the cruelty, the violence and selfishness. Finally this paves the way to the empowerment of the female characters through the sisterhood.

References
Primary Source
1. Alice Walker, *The Color Purple.* ISBN 978-1-7802- 2871-6 (paperback, London, 2014)

Secondary Source
1. Bloom, Harold, (ed), Alice Walker's *The Color Purple* (Modern Critical Interpretations), 2000.

Notes
1. Gerri Bates, Alice Walker: A Critical Companion (Westport: Green Press, 2005), 96.
2. Brenda R. Smith, 12. Henderson, Mae G. *"The Color Purple:* Revisions and Redefinitions" in Modern critical Views: Alice Walker,ed. Harold Bloom. Newyork: Chelsea House Publishers, 1989.

THE SELFISH AND SELFLESS HUMAN MINDS IN *'THE GENERATION GAP'* AND *'LOOT'* BY NADINE GORDIMER

Sarojaa.V.Kumar
Assistant Professor,
Department of English (Self- Finance),
Mannar Thirumalai Naicker College, Madurai – 625004

'Selfishness' is there in every human being to a certain level. No one is away from it, but the only point is that, to what extend? It is acceptable until it doesn't hurt other people or change their life. The father character in the short story '*The Generation Gap'* is sixty seven years old and has fallen in love for the second time. He loves a woman who is of his daughter's age. It is a psychological study that men have a harder time after 50 years. And it is a proven study that, they feel dread of losing their potency. Some men in order to overcome this type of feeling go in for a second relationship and try to prove their potentiality. Dr. Helen Fisher, the Biological Anthropologist, names this type of tendency to partner and re-partner as *'four year itch'.* People over 50 years feel that they have lost a part in them and by having an affair; they try to regain or reclaim it. They are bored with their partners and annoyed by the same qualities and characteristics of them.

> *"Human mind is not black and white, but black and grey"*
> -   *Graham Greene*

The color black symbolizes bad qualities of a mind and white symbolizes good qualities of a mind. Hence Greene says that, there is nothing called complete good and white mind but all the human beings have only black and grey mind. This means, nothing can be claimed as extremely good or bad because the measurement of good and bad changes from person to person. The father character James in this short story dumps over his wife for another woman and he never feels bad for it because according to him he has liked someone for the second time and needs an outlet for his emotions. Hence he informs his children about this news through Jamie, his least liked son. James thought Jamie was confident enough and would be the right person as a messenger to take this message. Alicia Parker was a second violinist in an orchestra. James had first met her in a plane while travelling to Cape Town for a meeting. Alicia was also going to participate in a musical concert. They both had seats next to each other and so had a chance to talk to each other. They had general conversations about their likes and dislikes. Their conversation grew like a forest fire and so as a token of love she offered a special ticket to him for her musical concert. He too went to the

concert especially to see her and was drawn towards her beauty. She was slim, tall and beautiful. Their second meeting was also in the plane while returning back. This time their seats were separated by the narrow pathway. But they very well over came that and talked a lot about their personal life and that is how it started.

James felt that this meeting was a precious one in his life and he was bold enough to break the 42 years of his marriage for the sake of her. There was nothing wrong between him and his wife but nothing was right as well. This was the major reason for him to leave his wife. He gave a word of his leaving and left his new phone number for the family people to contact him. There is another reason for him to give them a new number, he doesn't want them to call to his office and make a fuss about his personal affair. He one had the courage to leave his family, doesn't have the courage to reveal his affair to his office thinking it would damage his career. James wanted to be a perfect father before the eyes of his children. It is true that parents always want to show their children only their good face and positive points because they do not want their children to copy or learn something negative from them. Usually in families, parents frame a certain rules for the children and in most of the time the parents they themselves do not follow them. They think those rules are not applicable to them.

> "There's nothing wrong between Ishabel and me, but for a very long time there's been nothing right, either."

James and his family, who were whites, always affirmed that they were not racists and brought their children also the same way. These were only just words and they never practiced it. Ginnie while studying in university was in love with an Indian boy. She never could reveal or even tried to reveal her relationship to her parents because she very well knew what would happen if she does that. All their words against racism were only theory and they couldn't apply it when it comes to the life of their children. James when he faced the same situation in his life was very much ready to accept the colored child of that woman. His father was a journalist and colored. Now the matter of color was not a problem in his life but seemed to be an added advantage to him. He might have felt proud that he was ready to accept a abandoned woman along with her colored child. Gordimer uses the word 'Rainbow child' to indicate that the child was a mixture of many races.

> "The matter of the child might be an added attraction for him. The rainbow child. Many well-meaning people in the past now want some way to prove in practice the abstract positions they hid, in then."
>
> - *(The Generation Gap pg 85)*

Gordimer says that, one may wear a ribbon on him to indicate that he won't show any discrimination towards AIDS victims, but what if they find that the person taking care of their child is a HIV positive? Nadine Gordimer asks this as a question to the

readers. Of course, most of the people would not allow such a person near their child because of their fear. So we follow only a certain things as a ritual just because we try to wear a good mask before the society. The same way, the color of a person was a problem to James before had now turned into an element of attractions.

The Mother character in this story is a best example for selflessness. She tries to respect her husband's feelings and allows him to live a life for himself. Even after that, she never wants to reveal this news to her children just because she doesn't want her children to disrespect their father for his attitude. She allows him to live a life of his own liking saying, *"May he survive"*

> *"I told him, eight months after forty-two years, you've made your choice. May he survive it."*
>
> <div align="right">-   (The Generation Gap pg 78)</div>

These words show the generous mind of the mother. She never said anything even when her husband returned back. She accepted him as he is. She even accepted the change of his role as a husband to a new invading lover in the family that too only for a short period of time. It is often said that, silence is the best punishment one can give to other.

The word 'Loot' means, "Private property taken from an enemy on a war. In this short story, Gordimer portrays the real selfish mind of human being and proves that no one is out of it. As a child, every one of us would have the experience of stealing chocolates or sweets from our shelf. When we grow up, we are being taught that stealing or taking other's objects is a bad habit. But when things are out of shape, we tend to show our real face. Gordimer uses this as a key pointy for her short story *'Loot'*. *In 'Bhagavad Geetha'* Krishnan advices Arjunan and it is named as, Geethacharam. Krishna says,

> *What did you lose?*
> *Why do you cry?*
> *What did you bring to lose?*
> *What did you create to go as waste?*
> *Whatever you took, you took it from here*
> *Whatever you gave, you gave it from here*
> *Whatever is yours today will be someone else's tomorrow*
> *Another day it will be someone else's*
> *This is the role of the World.*
>
> <div align="right">-   (Geethacharam)</div>

From these lines it is clearly understood that whatever properties and assets that strive to save in our life and claim it as ourselves is nothing before the hands of Nature. As a proof to these lines, Gordimer has written this short story *'The*

Generation Gap'. In this story, an earthquake destroys everything and people try to grab things that they happen to see. Whoever may be the person, when he or she is in danger, he first tries to protect and safeguard himself. In our whole life we work hard and try to buy movable and immovable assets and we always boast ourselves and differentiate our class of living with these. But we tend to forget that men are born from dust and go bag to dust. Everything that we try to safeguard is not permanent. When nature decides to destroy, it completely destroys without seeing any partiality among people.

After the earthquake mentioned in this story, people of all different classes come to the street and there was no hierarchical difference. All became one in the hands of nature and they had to begin a new life from there. People rushed to take anything and everything they came across. Things that belonged to rich were taken by the poor and vice versa.

> *"The saliva of the sea glistened upon these objects; it is given that time does not, never did, exist down here where the materiality of the past and the present as they lie has no chronological order, all is one, all is nothing or all is possible at once"*

> - *(Loot pg 3)*

For a moment, while grabbing things from the street, people forgot all their pain and house wreck. Everyone was selfish at that point of time. Even the media was selfish and they took pictures of all the dead people just to increase their number of users. The man in this story lives in a hill top without any disturbance until the earthquake came. After the disaster, he came down to the seashore in search of an object which he himself never knew and at last takes a mirror in his hand and while seeing that the big wave from the sea engulfed him along with all the things. This situation indicates that people run and run without any destination and at last finds his or her identity or their place in the world and then is embraced by death.

> *"He takes it up, the object, the mirror, the sand pours off it, the water that was the only bright glance left to it streams from it, he is taking it back with him, taking possession at last. And the great wave comes from behind his bed-head and takes him."*

> - *(Loot pg 6)*

References

1. Gordimer, Nadine. *Loot.* London: Bloomsbury Publishing, 2003. Print.
2. Careerpapers.blogspot.in
3. Mumpsimus.blogspot.in
4. www.psychologytoday.com

THE SOCIAL CONCEPTUALIZATION OF CHETANBHAGAT'S *REVOLUTION* 2020

E.AnuShree
Ph.D Scholar, Assistant Professor of English,
Mangayarkarasi College of Arts and Science for Women, Paravai,
Madurai-625402

Dr.M.R.Chandran
Research Supervisor,
Associate Professor of English, Saraswathi Narayanan College, Perungudi,
Madurai-625022

Chetan Bhagat is an author who follows the aim of literature which is to represent the society as it.Through his book he strived to make people realise the reality of the life through his characters. Chetan Bhagat is an author representing the youth of India in all his seven novels where he dealt with the real picture of a university life, the real beauty of love, the actual aim of life and how to live a great life in this world filled with mediocracy, how to improve our attitude towards life and understand love is the cure to all the difficulties and finally how to learn to fight corruption if not corrected would eventually become an incurable cancer.

Chetan Bhagat, a rising star in the contemporary modern Indian literature, who is not only award winning writer but also a novelist, columnist, public speaker and a screenplay writer.Most of his literary works address the issues related to Indian youth and their aspirations which earned Bhagat status of the youth icon and received Society Young Achiever' award, Publisher's Recognition award and Film fare Award for Best Screenplay.

He was born on 22 April, 1974 in Delhi in a Punjabi family. His father was an army officer and his mother was a government employee in the agriculture department. He is married to AnushaSuryanarayanan, a Tamil Brahmin. He wrote Five Point Someone: What not to do at IIT [2004], One Night @ the Call Center [2005], The 3 Mistakes of My Life [2008], 2 States – the Story of My Marriage [2009], Revolution 2020 [2011], What Young India Wants [2012] and Half Girlfriend [2014]. Bhagat, an alumnus of Indian Institute of Technology [IIT] Delhi and IIM Ahmedabad, is seen more as a youth icon than as an author. Time magazine named Chetan Bhagat as one of the 100Most Influential People in the World. Chetan Bhagat, asuccessful investment banker turned into a prolific writer and through his writings changed the mind-set of the country on the way they think of Indian youth.

Bhagat mastered the art of commercial thinking and the title of Revolution 2020 makes the youth of India relate it to their religion Cricket and Former President of India honourableDr.A.P.J.AbdulKalam dream was towards India 2020 and made it reach the billions in India. Unlike Chetan Bhagat's first three novels, Revolution 2020has a focus on story line and surprisingly the clear cut plot can be briefed in one line as the willing sacrifice of Gopal for his soul mate Aarti.

Through this story Chetan Bhagat has made the readers to walk the path taken by millions of students going through hard times in a country like India as most schools in India have yet to start reservation of 25% to the students of the lower strata of society. The story is narrated from Gopal's point of view and therefore remains a one dimensional thought process. The novel starts its course in a typical Chetan Bhagat's style and the author himself comes to listen to the story of the protagonist and the novel makes it a point to have the characters from almost every strata of society except that of industrialist. Comparing Gopal who comes from the majority of Indian population who are middle class background whereas Raghav is from a well off family and Aarti comes from political background which comes into her characterisation.

Revolution 2020is the story that revolves around three childhood friends Gopal, Raghav and Aarti. Gopal's character has been the best portrayed through his feelings, his emotions, his ambitions and his frustrations through the words of Chetan Bhagat, transcending the readers to the lives of the characters. Aarti's character is strange and surprisingly very key to the lives of the other two characters. Her character is questionable at times due to the oscillating nature of her love. Raghav's character is perhaps a minor version of Ayn Rand's iconic character Howard one who only exists in Utopian world. Raghav gave more importance to his passion and goal which seems to have disregarded the suggestion of his father to get admission in IIT for which he was clearly eligible. He listens to his heart but thinks through his actions with his sharp mind. He wants to make a change and hence serves the oppressed of his city by communicating their pains through the media hoping the responsible authorities would take actions. Through his sheer focus he emerges as a successful journalist.

He writes in the daily news and distributes them to the social activists to make a change which he desires. His passion for being the change which he desires to bring into the system is well described by the author.The sacrifice made by Gopal for his belief is commendable if it was a real life character.Chetan has been able to connect the dots well throughout his narration and made the ending to the story reach the heart of the readers.Even though Chetan is known to be a common book reader's gift through his simple English, his narration style, the romance flowing through the story plot and the depth in the characterization add value to the author's vision. Emotions have been the key to the success of the book portrayed subtly and the flow of the story

is extremely contemporary and speaks volumes of the author. However we couldn't agree with Chetan Bhagat'sunderstanding of women and their nature. He portrays women in this book designedto be complex and confused. In the aim to add depth to the female lead in his story, he does so with a wrong impression on general women characterization.

Gopal, Raghav and Aarti have their own plans for their life driven by their own ambition. Gopal is attracted to the power given by money, Raghav is attracted to the positive impact he can bring to the world and Aarti is attracted to showcasing her beauty through the profession which can get her admiration. Gopal and Raghav being friends from their childhood and share the same bench in school also get attracted to the same girl as their girlfriend. Aarti loved Raghav more as shesaw an ideal youth in him. But the way in which Aarti never drops Gopal as a reserve option makes us question her intensions. Her patience is not letting Gopal go paid off after the death of Gopal's father. Gopal became an owner and the Director of a successful Engineering college and this success madeAarti adopt Gopal as a prospective groom. Chetan Bhagat helps the readers walk the life of a struggling student in Kota, where hell would be a word more preferred than the life in the streets of Kota.

The story weaves in the lives of Raghav, Gopal and Aarti which leads them to the depths oflove, ambition and crushing disappointment through desperation.Chetan had a clear vision of exposing the plight of India's private education that is suppose of a country and the only hope for millions of students from small town and villages but turns out to be a reflection of the political corruption which stops the country from reaching the heights of economic success. Statistics and predictive analysis states India would be the youngest country in the world in the next few decades. This makes the topic discussed by Chetan a crucial element in making honourable former President Dr.A.P.J.AbdulKalam dream come true which can become reality only by educating the youth and moulding them to reshape our country.

References

1. Bhagat, Chetan.*Revolution 2020*. New Delhi: Rupa& Co, 2011. Print.
2. Dodiya, Jaydipsinh. Ed.,*Critical Essays on Indian Writing in English*. New Delhi: Sarup and Sons Publishers, 2006. Print.
3. http://www.enotes.com/literary-criticism/realism-english-novel
4. http://www.chetanbhagat.com/about/

MOTHER THE AGENT OF PATRIARCHY: WITH REFERENCE TO JAMAICA KINCAID'S SHORT STORY "*GIRL*"

J. Lakshmi, M.A., M.Phil.
Assistant Professor& Head, Department of English,
Anna University Tindivanam Campus, Tamilnadu. India

Dr. J. Jayachandran, M.A., M.Phil., Ph.D.
Professor& Head, Department of English,
Anna University, Viluppuram Campus

Literature produced by post-colonial women writers should be read with the understanding of the unique nature of it. The voice of the writer is the representation of a voiceless gender in a colonized country. The verb 'colonize' means, take control of an area or country by force. Here, women were taken under control by the male who were also under the control of the imperial powers. The women become a colonized gender of the patriarchy also. The status of the women is devalued in the patriarchy by the male masters and the elder women were conditioned by the patriarchy in such a way that they act as agents to carry the patriarchal mores to the younger generation women. They tame and train their daughters to become a social model accepted and approved by the patriarchy. The mother figure in the short story "Girl" is on such agent who shapes her daughter to fit in the patriarchal frame work.

The Agent of Patriarchy in Girl

J.S.Mill says in *The Subjection of Women* "What is believed to be the nature of women is not natural, but the result of forced repression in some direction and unnatural stimulation in others." (J.S. Mill)

At the Bottom of the River is a collection of ten short stories by Kincaid. The enigmatic short story *Girl*, is a long uninterrupted single sentence story in which the mother, oppressive and authoritative, dictates the daughter the do's and don'ts in her way of becoming a woman. It starts with a litany of domestic chores:

> Wash the white clothes on Monday and put them on the stone heap;
> wash the colour clothes on Tuesday and put them on the clothes line
> to dry;...cook pumpkin fritters in very hot sweet oil; soak your little
> clothes right after you take them off... Soak salt fish overnight before
> you cook it... this is how you sweep a corner; this is how sweep a

> whole house; this how you sweep a yard; … this is how you set the table for tea; this is how you set the table for dinner;this is how you set the table for lunch;this is how you set the table for breakfast; this is how you make a bread pudding; this is how to make doukona; this is how to make pepper pot…*(Girl, 4-5)*

She teaches the girl from washing, cooking, cleaning to shopping.

> …When buying cotton to make yourself a nice blouse, be sure that it doesn't have gum on it, because that way it won't hold up well after a wash... Always squeeze bread to make sure its fresh.... *(Girl, 3- 4)*

The mother's litany continues to teach the girl the other womanly skills like sewing, ironing and gardening.

> This is how to sew a button; this is how to make a buttonhole for the button you have just sewed on; this is how to hem a dress when you see the hem coming down... This is how you iron your father's khaki shirt so that it doesn't have a crease; this is how you grow okra-far from the house, because okra tree harbors red ants; when you are growing dasheen, make sure it gets plenty of water or else it makes your throat itch when you are eating it....*(Girl, 4)*

The mother imposes and injects the domestic responsibilities into the girl thereby making the girl a good kitchen mechanic. Edith Clarke in his *My Mother Who Fathered Me (1966)* brings out the Caribbean families where the mother has the onus of domestic responsibilities to look after the household as well as bring up the children. They multitask both in domestic and political sphere whereas the father is left free of responsibilities. By passing on the same domestic onus to the daughter the mother ensures the continuity of gender mores. She tries to shape the girl into a good woman advocated by the androcentric society. The girl should win the acceptance of the male masters. The mother places the girl perfectly into the framework of the phallocentric. The mother's relentless instruction does not fail to touch the character of the girl. Black woman are sexually exploited and at the same time they are expected to be chaste and not promiscuous.

> Sundays try to walk like a lady and not like the slut you are so bent on becoming;... You mustn't speak to wharf-raft boys, not even to give directions; this is how to behave in the presence of men who don't know you very well, and this way they won't recognize immediately the slut I have warned you against becoming;... Don't squat down to play marbles-you are not a boy, you know;...*(Girl, 4-5).*

The mother gives clear instruction like wash, cook, hem, iron, sweep, grow…. All the verbs are about domestic chores which is where the female potentials are spent.

The daughter is warned against becoming a slut. She castigates the daughter that she will become a slut someday and severely admonishes her against it. In a stern voice she imbues the daughter with values. Patricia Hill Collins in her book *Black Feminist Thought: Knowledge, consciousness and politics of empowerment*explains the troubled mothering of black mothers as:

> Black daughters must learn how to survive in interlocking structures
> of race, class and gender oppression while rejecting and transcending
> those same structures. (Patricia Hill Collins, 1990)

To develop these skills in their daughters, mothers demonstrate "varying combinations of behaviors." On the one hand, "to ensure their daughters' physical survival, mothers must teach them to fit into systems of oppression." On the other hand, mothers

> … also know that of their daughters uncritically accept the limited
> opportunities offered Black women, they become willing participants
> in their daughters' physical survival, but at the high cost of their
> emotional destruction(Patricia Hill Collins, 1990)

In the Caribbean culture it very normal for a male to be promiscuous. They have numerous children with many women whom they don't marry. Children are born out of marriage and among them only the male child inherits the father's name. In such a society a mother gives iterations about the shame of becoming a slut. Colonial mores has created a sense of shame when it comes to female sexuality by prescribing the oppressive Victorian norms which was further enhanced by the post-colonial male writers who nurtured tradition which held high value for female virginity and exercised control through the institution of marriage. The Caribbean patriarchy has created lopsided values and passes on those values through women who unconsciously become the agents of the patriarchy. The mother who warns her daughter against becoming a slut gives a contradictory advice like how to abort an unwanted child, how to love a man, how to handle a male bully:

> This is how to make a good medicine to throw away a child before it
> even becomes a child;…, This is how to bullya man; this is how a man
> bullies you; this is how to love a man, and if this doesn't work there
> are other ways, and if they don't work don't feel too bad about giving
> up;…(*Girl,*5)

Sexual exploitation and unwanted pregnancies are common happenings in the Caribbean culture. Helen Pyne Timothy writes of the mother's discourse in *Girl*:

> … the girl is being urged to use her womanly wiles to accomplish
> results from an act she is simultaneously being taught as shameful
> included here is also a recognition that a women's sexuality must be
> used to accomplish a raise in social status-possibly an unconscious

> explanation for the beautiful, strong, young mother's marriage to a much older weaker far less beautiful husband, who offered her marriage and a comfortable home. (Helen Pyne Timothy, 240)

Deculturation and Acculturation in Girl

The mother as a senior member of the doubly colonized understands the vulnerability of the girl child in the patriarchic world and instructs the child to tackle sexual exploitation. The mother also passes on colonial values to daughter undermining the native culture. She admonishes the girl for singing 'bena' on Sunday classes. The native culture of singing bena is viewed as savagery. She wants her daughter to behave like a lady which is the colonial business. She talks of table manners, which is dictated by the colonial masters. The mother becomes the agent of the patriarchy and the imperial powers and thereby doubly colonizing the girl. Poet and feminist Adrienne Rich says in her analysis of motherhood as "the mother's self-hatred and low expectations are the binding-rags for the psyche of the daughter" she argues:

> …few women growing up in patriarchal society can feel mothered enough; the power of our mothers, whatever their love for us and their struggles on our behalf, is too restricted and it is the mother through whom patriarchy early teaches the small female her proper expectations. The anxious pressure of one female to another to conform to a degrading and dispiriting role can hardly be termed 'mothering', even if she does this believing it will help her daughter to survive. (Adrienne Rich, 243)

This short story, which is the story of an acculturation, Patricentric conditioning of a girl by her oppressive mother restricts the freedom of the girl by pushing her into the drudgery of domesticity and reduces her potentials to accusation of mundane kitchen chores. The fictional mother in 'Girl' wards off future suffering with warnings about bullying males and dismissive lovers and with a recipe for an abortificient to end unplanned pregnancy. The concluding phase envisions a competent shopper who, like her indomitable mother, squeezes bread for freshness while facing down a disapproving male Baker. The image portrays a circumscribed life of women where they lay claim to limited powers, such as the freshness of baked goods and carrying of their own embryos to term. Isabella Peniere says,

> …the mother was seen as not only the teacher of gender roles but first and foremost the most important transmitter of culture. In *At the Bottom of the River* and *Annie John*, the mother is censured for forcing on her daughter a proper colonial identity, for mimicry of

white ways, i.e., for emulating the mores of white colonial elites and for being an accomplice in the process of the daughters enculturation. The major goal that the mother sets for her daughter is social success which she understands as upward class mobility, an ambition that can be realized exclusively through a marriage with a respectable male. In order to be a desirable candidate for wife the girl must obey colonial codes – she must pour & corn on who are already beneath her in the social hierarchy, she must show reverent respect for those who are above her , she must cherish her sexual purity, resist her natural impulse to "become a slut" and avoid "sluttish" behavior. She must behave like a lady and have impeccable manners. European norms, Christianity, Sunday school, piano lessons are essential for the daughter's up-bringing, whereas African Caribbean customs should be resisted, as they can reduce the daughter's acceptability and respectability. Therefore, she should show disdain for the local folklore – the culture of the dispossessed and the uneducated. Penier (2008)

The mother who is the agent of the Patriarchy tries to colonize the thought and the life style of her daughter. By doing so, she unconsciously crushes the individuality and the ethnicity of her own daughter. Kincaid brings the contours of pains in the lives of women and how they endure physical and psychological pains inflicted on them.

References

1. Collins Patricia 1900, Hill Black feminist Thought: Knowledge, Consciousness and Politics of Empowerment, Routledge, New York.
2. Kincaid, Jamaica 1983, At the Bootom of the River, Penguin, New York.
3. Penier Izabella 2008, Postcolonial, feminist and transatlantic studies - a confluence of ideas in Jamaica Kincaid's fictionKincaid, Jamaica (1949), Literatura amerykańska - historia.
4. Rich Adrienne 1986, The Colonial Legacy in Caribbean Literature, Karnak House, London.
5. Timothy & Helen Pyne 1990, 'Adolescent Rebellion and Gender Relations in At the Bottom of the River and Annie John', in Cudjoe, Selwyn R. (ed.) Caribbean Women Writers: Essays from the First International Conference, Calaux Publications, Wellesley.

WORK- LIFE BALANCE

Mrs.R.Meenakshi Devi
Assistant Professor, Department of B.B.A,
Mannar Thirumalai Naicker College, Madurai

Abstract

This study focuses on assessing the impact of work-life balance determined by work-family conflict and family work conflict on the wellbeing of individuals. Wellbeing was measured by levels of family satisfaction, work satisfaction and psychological distress. Work and family role interference suggests that responsibilities in separate domains such as work and family compete with each other in terms of limited time, psychological resources and physical energy, which leads to negative outcomes in both areas. In contrast, work and family role enhancement suggests that participation in multiple roles can lead to better functioning in other life domains. The dimensions of WLB, consequences of imbalance in work-life and steps to balance work- life to enhance our well being are also discussed.

Key words: *work life balance, work place, family life, work life conflict, well being*

Introduction

Work–life balance is a concept including proper prioritizing between "work" (career and ambition) and "lifestyle" (health, pleasure, leisure, family and spiritual development/meditation). This is related to the idea of lifestyle choice. Work-life balance is a central issue affecting wellbeing, as family and work are the most important elements of everyone's life. Any competing demands of work and family life cause conflict and negatively affect the wellbeing of workers.

The work–leisure dichotomy was invented in the mid-1801s. Paul Krasser remarked that anthropologists use a definition of happiness that is to have as little separation as possible "between your work and your play". The expression "work–life balance" was first used in the United Kingdom in the late 1970s to describe the balance between an individual's work and personal life. In the United States, this phrase was first used in 1986.

Work life balance is about effectively managing the juggling act between paid work and the other activities that are important to people. It's not about saying that work is wrong or bad, but that work should not completely crowd out the other things that matter to people like time, with family, participation in community activities, voluntary work, personal development, leisure and recreation. The right balance is a very personal thing and will change for each person at different times of his or her lives. For some people the issue is being able to get into work or find more work rather than having too much work. There is no one size fits all solution.

A balanced life is one where we spread our energy and effort – emotional, intellectual, imaginative, spiritual and physical – between key areas of importance. The neglect of one or more areas, or anchor points, may threaten the vitality of the whole.

Dimensions of WLB

Most employees identify with not only the organization, but also other facets of their life (family, children, religion, etc.). Sometimes these identities align and sometimes they do not. When identities are in conflict, the sense of a healthy work–life balance may be affected. Organization members must perform identity work so that they align themselves with the area in which they are performing to avoid conflict and any stress as a result.

Work–life conflict is not gender-specific. According to the Center for American Progress, 90 percent of working mothers and 95 percent of working fathers report work–family conflict. However, because of the social norms surrounding each gender role, and how the organization views its ideal worker, men and women handle the work–life balance differently. Organizations play a large part in how their employees deal with work–life balance. Some companies have taken proactive measures in providing programs and initiatives to help their employees cope with work–life balance.

The conflict of work and family can be exacerbated by perceived deviation from the "ideal worker" archetype, leading to those with caretaker roles to be perceived as not as dedicated to the organization. This has a disproportionate impact on working mothers, who are seen as less worthy of training than childless women.

Many authors believe that parents being affected by work–life conflict will either reduce the number of hour's one works, where other authors suggest that a parent may run away from family life or work more hours at a workplace. This implies that each individual views work–life conflict differently.

Children were another factor reflecting on work-family conflict. Men with an oldest child aged less than 5 experienced higher levels of positive work to family spillover as compared to men who did not have children. However, both women and men who had children at any age indicated higher family-work conflict than those who did not have children. It is also recognised marital status as a factor influencing work-family conflict. Unmarried women and men experienced lower levels of work-family conflict than women and men who were married.

The measurable aspects of work-life balance are satisfaction, lack of role conflict and an overall sense of harmony. The balance between family and work domains also involves time balance, involvement balance, and satisfaction balance. As these

components have bi-directional effects on work and family domains, participation in the work role may interfere or enhance the performance in the family role, and vice versa.

Work- Life Balance is Increasingly an Issue for any Country, Jobs, the Workplace and the Workforce are changing as

More women and sole parents go in to work.

More people juggle more than one job.

The work force ages and it is increasingly diverse.

Business continues to compete globally to hire skilled workers.

Increased responsibilities at work

Increased responsibilities at home

Longer working hours

Personal mindset

Technology changes the way we work. [Eg. Cell phones & PC's blur the distinction between our work and personal time]

For any Country the Two Biggest Work Life Balance Problems Are

People with not enough work or income.

People who have too much work; the low paid need to work long hours to earn enough and the higher paid who may feel trapped into working more hours than they want to.

Risk Related to Work-Life Imbalance

Poor health;

Unresolved conflict;

Poor performance;

Financial loss

Well Being

Wellbeing is a crucial component of a happy, good-quality life .Wellbeing is associated with happiness, satisfaction, vitality, optimism, passion, and self-actualisation. Aristotle in his Nicomachean Ethics states that the highest good for human beings and can be achieved by correct actions that lead to individual wellbeing. Wellbeing is the utilization of "an emotional, intellectual, physical, spiritual and social dimension that expands one's potential to live and work effectively and to make a significant contribution to society".

Wellbeing can be assessed by individuals' subjective judgment in relation to their life satisfaction, or psychological health (e.g. perceived stress); as well as by individuals' objective measures of physical health (e.g. blood pressure). Research shows that wellbeing is strongly correlated with better mental health, better physical health and longevity.

Wellbeing can be Divided Into

(a) Subjective wellbeing, focusing on positive effects and the absence of negative effects; and

(b) Psychological wellbeing, focusing on achieving individuals' full potential.

This study considers wellbeing as subjective wellbeing, which can be also defined as emotional well being. This decision was based on the argument that the term 'well-being' is often used rather than 'subjective wellbeing' in order to avoid "any suggestion that there is something arbitrary or unknowable about the concepts involved"

Many researchers indicate a strong positive correlation between work satisfaction and wellbeing. Work satisfaction can be divided into affective work satisfaction based on individuals' overall feeling about their job as a whole; and cognitive work satisfaction based on individuals' logical evaluation of the job conditions (e.g. working hours, pay and pension plans), opportunities and outcomes.

Emotional wellbeing was explained by Aristippus in the fourth century BC as experiencing bodily pleasure and avoiding suffering. This pleasure-pain theory is used by Ryan and Deci (2001) who argue that wellbeing involves three components of happiness:

1. Life satisfaction,
2. The presence of positive mood, and
3. The absence of negative mood.

Satisfaction with life, positive effect and negative effect are the main factors indicating wellbeing Therefore, it can be understood that well-being refers to positive and negative evaluations that people make about their lives, which includes "reflective cognitive evaluations, such as life satisfaction and work satisfaction, interest and engagement, and affective reactions to life events, such as joy and sadness".

Here are a Few Practical Steps we Can all Take to Loosen the Grip that Stress Has on us and Win Back the Balance and Well Being in Our Lives.
At Work

Set manageable goals each day. Being able to meet priorities helps us feel a sense of accomplishment and control. So be realistic about workloads and

deadlines. Make a "to do" list, and take care of important tasks first and eliminate unessential ones.

Be efficient with your time at work. When we face a big project at work or home, we have to start it by dividing it into smaller tasks. Complete the first one before moving on to the next.

Ask for flexibility. Flex time and telecommuting are quickly becoming established as necessities in today's business world, and many companies are drafting work/life policies.

Take five. Small breaks at work—or on any project—will help clear our head, and improve our ability to deal with stress and make good decisions when we jump back into the grind.

Tune in. Listening to a favorite music at work will foster concentration, reduce stress and anxiety, and stimulate creativity.

Communicate effectively. Looking at a situation from someone else's viewpoint can also reduce our stress. In a tense situation, either we have to rethink our strategy or stand our ground, calmly and rationally.

At Home

Divide and conquer. Make sure responsibilities at home are evenly distributed and clearly outlined—will avoid confusion and problems later.

Don't over commit. Let us learn to say," no." and shed the superman/ superwoman urge!

Get support. Chatting with friends and family can be important to our success at home—or at work—and can even improve our health.

Take advantage of your company's Employee Assistance Program (EAP). Many organizations offer resources through an EAP, which can save our precious time by providing guidance on issues like where to find a daycare center and caretaking for an elderly parent, as well as referrals to mental health and other services.

Stay active. Aside from its well-known physical benefits, regular exercise reduces stress, depression and anxiety, and enables people to better cope with adversity.

Treat your body right. Being in good shape physically increases our tolerance to stress and reduces sick days. to more problems.

Get help if you need it. Asking for help is not a sign of weakness—taking care of our self is a sign of strength.

Conclusion

A review of public holidays and paid holidays across a sample of countries, including Australia, China, France, Germany, Singapore , The US and The UK shows that India is actually quite comparable in terms of days of vacation and holidays provided by law and general practice. It would, therefore, be fair to assume that the intent of law as well as the espoused values of organizations seems to be in favour of providing a fair amount of leisure and balance. Whether it has translated into reality is another matter.

INFINITE MARKETING

Dr. T. Agnes Natchathiram
Assistant Professor, Dept. of Business Administration
Mannar Thirumalai Naicker College
Madurai – 625 004

Introduction

In this era of digital world happenings in marketing is just beyond imagination. The future of marketing is infinite. Since the days of insane luxury are behind us, the future marketers have to work harder for the foreseeable future. They need to spend some strategic time and energy to succeed in future marketing.

Future marketing must get out of our day to day routine and focus on the macro trends that are painting our marketing world. Though Today's customer-facing technologies are very familiar, in future customer-facing technologies should be revolutionary and social. In general the velocity of the changes in future will not be predictable and measurable due to more dynamic competitive environment supported by vast technological changes. The upcoming Nano revolution had made companies to fine tune the marketing activities and strategies to infinity. This publication is mere a prediction of the infinity in marketing.

Tactical Marketing

Current Technological momentum and expected future galloping trends in all spheres of life will be drastically & dramatically change the social and family life which may likely to lead total changes in allied spectrum of surroundings. These expected situations forced the human race particularly consumers necessarily forced to adopt changes in a vicious circle Hence under the above stated environment, the future of marketing will be of more dynamic and tactful for sustaining the life of the corporate and life cycle of the products. In all spheres of business, marketing requires a total insight into geographic, demographic and psychographic areas with relevance to comprehensive technological changes in comparison with buyer's behaviour.

Virtual Marketing

The future marketing professionals will transform their responsibility from consistent, structured & visible marketing to Global multidimensional visible/ invisible (virtual) marketing.

When marketing become more virtual due to technology and changing life styles with changed govt. policies and statutes governing service warranties, consumer litigations, growing compensations the marketing activities becoming more complicated.

Transparency and Brand-Customer Relationships

Currently, customers are seeking more transparency from brands At present all the developed and developing countries under globalisation norms by statute made transparency as mandatory to satisfy the customer's expectations by way of revealing the /manufacturing process etc which reduces the secrecy& market strength of the corporate which dominates the market with unique products status so far. This trend will continue with customers becoming more demanding in their expectation of transparency. Genuine brands – the ones that "walk the talk" and create real value – will be rewarded. This means brands that still haven't made their customer dealings transparent are headed to a future of doom.

Social Responsibility

Millennial's are highly educated and socially liberal. In future social responsibility creates competitive immunity and makes your business more sustainable in the long-term.

"CSR can be much more than a cost, a constraint, or a charitable deed—it can be a source of opportunity, innovation, and competitive advantage"

- Harvard Business Review

The above Harvard Business Review reveals that apart from helping companies differentiate themselves in an already crowded marketplace, social responsibility also inspires innovation within corporations thereby developing longer-term immunity and business sustainability.

Dominance of Social Media in Interactive Marketing

Role of front line employee's become more comprehensive and complicated due to customer's expectations with respect to growing knowledge and consumerism. From cell phones to smart phones, tablets to wearable gadgets, the evolution of mobile devices is one of the prime factors influencing the marketing world. As the focus is shifting to smaller screens, brands will be able to strike up a more personalized relationship with their customers by leveraging the power of mobile. Social media is becoming a powerful & potential tool to decide the major changes in the marketing activities.

Mass Customization and Extreme Customer Centricity

Customer's co-design their customized product The power of user-generated content will surpass branded content as brands begin to relinquish control of their own brands' marketing to their customers.

Conclusion

The above stated conceptions reveals that future marketing not only rely on excellence to consumer satisfaction but take into account the well being of society/ environment/environment. Essentially, if the customers are happy, they'll gladly wear the marketer's hat and do what is needed to bring their favorite brand in focus. The future will witness the rise of better analytical tools to help marketers gauge the success of their campaigns. Therefore, Marketing being infinite the Millennial-focused brands will have to change their game to stay relevant.

Reference

1. "Be the Elephant", Steve Kaplan, Pearson Publishing Company.
2. "Fast Innovation", Michael Georg, Workman Publishing, New York.
3. Harvard Business Review
4. CFO Insights.
5. Business India Series
6. Business World.
7. The Smart Manger
8. The Journal of Manager.
9. "The sigma way" Roland Cavanagh, Tata Mc Graw Hill.

A STUDY ON STRESS MANAGEMENT AMONG PRIMARY SCHOOL WOMEN TEACHERS OF ERODE DISTRICT

Dr.S.TajulAarifeen
Assistant Professor, Department of Commerce,
M.S.S.Wakf Board College, Madurai

Abstract

Stress is inseparable part of human life. Each and every individual realizes and faces the problem of stress at every walk of life. It affects all the sections of society such as poor, rich, children, aged people, literates and illiterates.The advancement of science and technology has brought many changes not only in life style it has made tremendous changes in the nature of job as well. At present the day to day affaires of an individual become complex in nature. This situation causes stress within the individual and the society in general. This study analyses the perception of stress and coping strategies adopted by the primary school teachers.

Introduction

Stress is inseparable part of human life. Each and every individual realizes and faces the problem of stress at every walk of life. A stress has two effects one is positive another one is negative effect. Stress may be a good friend when an individual has the ability to manage it or it may be a worst enemy when an individual not prepared to tackle the situation tactfully. It has a positive effect in a work environment when one has to complete the work in time, which necessitates the time limit within which he or she has to complete the work. This time limit creates some degree of stress with in him and this stress is must in order to complete the work successfully. A positive stress will help the individual to accomplish the task and pave way for the development of individual. When one has positive stress will have positive attitude. It has a negative effect when an individual was facing undue pressure in the work environment that ultimately leads to depression towards the work.

Review of Literature

S.Ahamed, Bharadwaj, et.al., (1985)[1] in their research titled "A Study of stress among executives" they explored that public sector executives experience slightly more stress that their counterparts in private sector. Background factors like age, education, income, experience and marital status of executives were unrelated to role stress in both the groups. Bogg, Janet and Cooper, Cary (1995)[2]in their review titled, "Job Satisfaction, Mental Health, and Occupational Stress Among Senior Civil Servants", they indicated that the main sources of stress among the senior civil servants were

"factors intrinsic to the job" such as poor pay and working conditions, and a strong feeling of possessing little control over their job and their organization.

B.Patnayak(2000)[3] in his study " Effect of shift work and Hierarchical positions in satisfaction commitment stress and HR Climate" found that the level of stress experienced does not vary according to positions. Executives and supervisors irrespective of the shift did not show significant differences in their job stress.

Objective of the Study

The following are the objectives of study
1. To analyse the demographic variables of the sample respondents
2. To analyse the perception of source of stress
3. To analyse the coping strategies adopted by the respondents.

Sampling Design

The criteria for selection of the respondents for this paper were women school teachers working in primary schools of Erode district. The total sample size was 75 femalerespondents who were selected by simple random sampling method.

Tools of Analysis

The following tools were administered for the study purpose.
1. Percentage Analysis
2. Likert's 5 point scaling technique

Demographic Variables

The demographic variables such as age, marital status and total servicewere presented in Table 1.

Table1 Demographic Variables of the Respondents

Age		
Demographic variable	No. of Respondents	Percentage
Below30	37	49.3
30-40	24	32.0
Above 40	14	18.7
Total	75	100.0
Marital status		
Demographic variable	No. of Respondents	Percentage
Married	50	66.7
Unmarried	25	33.3
Total	75	100.0

Total service		
Demographic variable	No. of Respondents	Percentage
Less than 5 years	18	24.0
5-10 years	43	57.3
Above 10 years	14	18.7
Total	75	100.0

Source: computed from Primary Data

It is inferred from the Table 1 that majority of the respondents (49.3%) were below 30 years of age group followed by 30 - 40 years of age group (32%). 18.7% of the respondents were above 50 years of age group. Majority of the respondents (66.7 %) were married followed by unmarried (33.3%). Total service is concerned 57.3% of the respondents were having 5-10 years of total service followed by less than 5 years of total service(24%).18.7% of the respondents were having above 10 years of total service.

Measure the Perception of Stress by the Respondents

Likert's 5 point scaling technique has been applied ranging from no stress to very high stress in order to measure the level of stress perceived by the respondents.

Measures	Assigned Value
No Stress	5
Very Low Stress	4
Low Stress	3
High Stress	2
Very High Stress	1

Working Hour Related Stressors

Working hour related stressor is the vital and strong influencing factor that cause stress to an individual. Major portion of life time spent in the office or work place. In a work place numerous transactions with relates to the job has to be carried out within the prescribed time limit that time bound pressure and the work environment naturally creates stress. This stress level become high especially when we have to work quit for long working hours.

Table 2 Working Hour Related Stressors

Serial No	Working hour related Stressors	No stress	Very low stress	Low stress	High stress	Very high stress	Total score
1	Too long and unsociable working hours	155 (41.3%)	92 (30.7%)	51 (22.7%)	4 (2.7%)	1 (2.7%)	303
2	Strict and unpredictable working hours	145 (38.7%)	36 (12.0%)	27 (12.0%)	56 (37.3%)	0 (0%)	264
3	Constant time pressure due to heavy workload	0 (0%)	64 (21.3%)	42 (18.7%)	50 (33.3%)	20 (26.7%)	176
4	Being under pressure to work over time	0 (0%)	68 (22.7%)	63 (28.0%)	54 (36.0%)	10 (13.3%)	195

Source: Computed from Primary Data

It could be observed from Table2 that the statement "Too long and unsociable working hours"constituted highest perceived variable in the working hour related stressors dimension with the maximum score of 303followed by the statement "Strict and unpredictable working hours"with a perception score of 264.The least perceived statementswere "Being under pressure to work overtime" and"Constant time pressure due to heavy workload" with a scores of 195 and 176 respectively.

Coping Strategies for Relieving Stress

Coping strategies are the practices followed by the primary school teachers for relieving their stress. The following table shows some of the coping strategies adopted by the primary school teachers.

Table 3 Coping Strategies for Relieving Stress

Serial No	Coping Strategies for Relieving Stress	No. of Respondents	Percentage
1	Set priorities	6	8.0
2	Take out time for leisure	16	21.3
3	Watching T. V.	18	24.0
4	Meditation	8	10.7
5	Talk to someone	27	36.0
	Total	75	100.0

Source: Computed from Primary Data

It is observed from the above Table 3 that majority of the respondents (36%) were adopting the coping strategy of talk to someone followed by watching T.V (24%). 21.3 % of the respondents were adopting the coping strategy of take out time for leisure. 10.7% of the respondents adopting a coping strategy of Meditation and 8% of the respondents were adopting a coping strategy of set priorities to relieve their stress.

Major Findings

Majority of the respondents (49.3%) were below 30 years of age group.

Majority of the respondents (66.7 %) were married.

57.3% of the respondents were having 5-10 years of total service.

"Too long and unsociable working hours" constituted highest perceived variable in the working hour related stressors dimension.

Majority of the respondents (36%) were adopting the coping strategy of talk to someone.

Conclusion

The present work environment creates stress and it's unavoidable. But by adopting suitable measures we can reduce the degree of stress to a greater extent. It is the duty of the management to safe guard the interest of their work force. The management has to create awareness regarding the concept of stress and its consequences on individual and organisation as a whole. Stress not only affects the physical and psychological wellbeing of an individual it affects the morale of an employee which inturn affects the productivity of an individual

References

1. S. Aamed., A. Bharadwaj., S. Narula, Study of Stress among Executives, Journal of Personality and Clinical Studies, Vol.1 (2), 1985, pp. 47-50
2. Bogg, Janet and Cooper, Cary "Job Satisfaction, Mental Health, and Occupational Stress Among Senior Civil Servants", Human Relations; Mar95, Vol. 48 Issue 3, p327-341, 15p.
3. B. Patnayak., Effect of Shift work and Hierarchical positions in satisfaction commitment, Stress and HR climate, Management and Labour studies, 25(2) 2000, pp.126-135.

A STUDY ON WATER CRISIS IN URBAN SECTOR WITH SPECIAL REFERENCE TO MADURAI CORPORATION IN TAMILNADU

S.Ganesan
Associate Professor, PG & Research Department of Commerce,
Mannar Thirumalai Naickar College, Madurai, Tamilnadu

S.Kasi
Assistant Professors, PG & Research Department of Economics,
Thiagarajar College, Madurai-09, Tamilnadu

Water is important for human life; safe drinking water influences the quality of health and productivity. India's fortunes in this century will be dictated by how well it can manage its water resources.[1] Water is called *"indrajal"* in mythology the nature's gift through rainfall. It not only satisfies the thirst of human beings but also gives food and sustains life of human beings, plants and animals. In fact, great civilizations settled and flourished around water sources and societies evolved their entire cultures and livelihoods based on it. India as a country with abundance of natural resources is blessed with large resources in terms of water. However, the availability of fresh water varies from place to place based on its geo-physical set-up and natural resources in the country. At present, irrational and unsustainable water withdrawal from ground, tank and reservoirs is on increase. Water is mainly being used for Agriculture and industrial purposes causing drinking water scarcity to the human being. Moreover, water use for drinking and domestic purposes is estimated around 7 to 9 per cent of the total fresh water in India. As per the estimates of national water commission, the total water requirement of India in the year 2050 will be about 973 billion cubic meters depending on its population growth. (Sivaram.P, 2006)[2]

Research Problem

Water is a major limiting factor of the environment, both for biological systems and human societies. Water shortages in many parts of Madurai city result from rising demand, unequal distribution and increased contamination. The extension areas of Madurai city are especially vulnerable to the effects of water scarcity. Domestic water use includes for drinking, food, preparation, sanitation, cleaning, watering gardens and service industry. Although the quantity of water required for domestic need is not large, the quality must be high. Therefore, water shed management and conservation are often more economical and environmentally sound ways to prevent water scarcity and store water for future use than building house dams and reservoirs. The issue of

equity and fairness in water distribution by Madurai Corporation is also important. The concerted research on water management in Madurai Corporation is conducted in this backdrop.

Objectives of the Study

To assess the domestic water use pattern and household water resource management practices of sample households;

1. To find out the factors affecting nutrient loss and contamination of ground water in the study area and
2. To offer policy suggestions for improving judicious and optimum distribution, utilization and management of water resources to ensure better quality of life in Madurai Corporation.

Research Design
Data Base

This study utilized both primary and secondary data. The secondary data derived from the official sources and other publications, and primary data, through a field survey, have been used for the study. The duration of the study relates to three calendar years i.e., 2010-2013 in respect of primary data. The study covered Madurai Corporation. The corporation has four zones namely, Zone-I (Madurai West), Zone-II (Madurai North), Zone-III (Madurai East), Zone-IV (Madurai South).

The selection of sample households was done through using purposive random sampling. The selection of households was made on the basis of households with more than four members in a family. Keeping in view of the time and cost involved, the present study has limited the size of the sample in to 432 sample households which forms 2 per cent of the total number of households in the selected wards.

Global Level Sectoral Consumption of Water

The overall water usage and per capita domestic consumption of water is expected to increase due to the growth of population and urbanization in low and middle income countries

High Income Countries	Low/Middle Income Countries
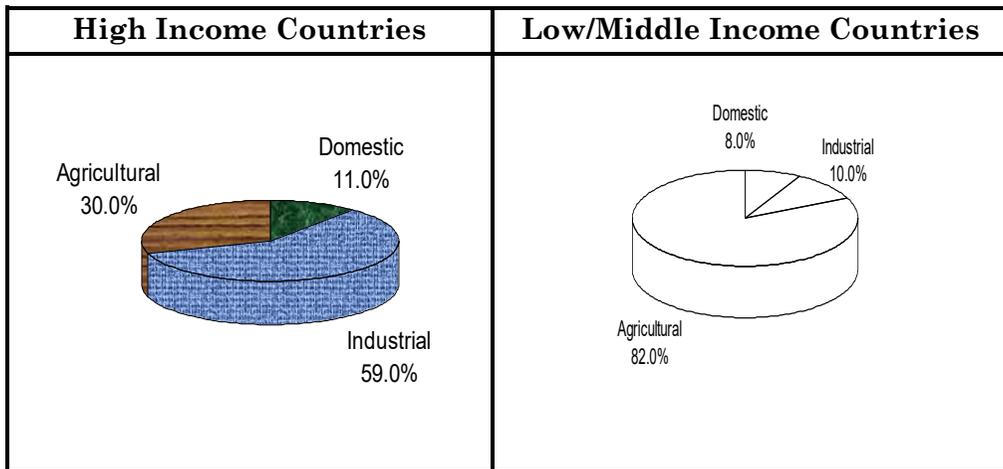
Figure 1 Global Level Water Consumption in Different Sectors

It is confined that industrial sector consumes the largest percentage share of water in respect of high income countries. The share of agriculture and domestic sector constitute 30 and 11 per cent respectively to the total. In the case of low and middle income countries, agricultural sector is the major consumer of water than industry and domestic sector. They accounted for 82 per cent, 10 per cent and 8 per cent respectively to the total. The water demand analysis revealed that agriculture is the core sector found in low and middle income countries whereas industry is the cone sector found in high income countries. Therefore, water consumption varies between countries and among sectors in the World.

Precipitation Level and Water utilization

The level of precipitation water usage among different sectors and treatment of waste water in agriculture is analysed and presented in Figure.2

Water utilization mostly rely on the level and volume of precipitation in the country. It is noted that 64 per cent of precipitation is on surface and 36 per cent on ground level. It is to highlight that a total of 1853 Tr.litres of water reserves received every year. The usable water constituted 1076 Tr.litres and 777 Tr.litres of non-usable water. The non-usable water consists of salinity and salt water. The sector-wise water usage in India evidenced that agriculture accounted for 89 per cent of water consumption to the total, whereas industry and domestic sector's share is only 6 and 5 per cent respectively to the total. The agricultural waste water consist of waste, sewage and treated water. They constituted only 16.24 Tr.litres and 5.84 Tr.litres of water respectively.

Fig 2: Perception of water utilization
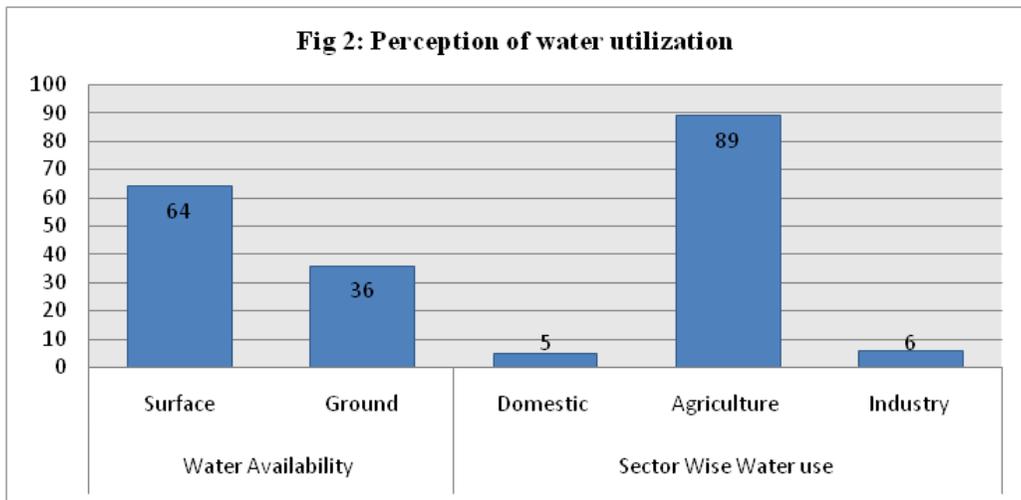
Total Water Demand in Madurai Corporation

The total water demand and net surplus or resultant deficit for the Madurai Corporation in the year 2013 has been estimated on standard water consumption rate of 90, 110 and 135 Ipcd and the results are given in Table 1.

Table 1 Total Water Demand on Madurai City

Season		Annual Requirement (MM/litre) at			Average Total
		90 Ipcd	110 Ipcd	135 Ipcd	
Normal	Water demand	107.90	131.87	161.85	133.87
	Water availability	91.00	91.00	91.00	91.00
	Deficit (MM Litre)	16.9	40.87	70.85	42.87
Summer	Water Demand	104.81	128.11	157.22	130.05
	Water Availability	68.00	68.00	68.00	68.00
	Deficit	36.81	60.11	89.22	62.05
Over all	Water Demand	106.35	12.99	159.53	131.96
	Water Availability	79.50	79.50	79.50	79.50
	Deficit	26.85	50.49	80.03	52.46

Source: Secondary Data

MM Ltrs – Million Litres

Ipcd – Infection prevention and Control Development.

The water demand is normal season and summer season inrespect of Madurai Corporation is estimated with the water consumption standards of 90 IPCD, 110 IPCD and 135 IPCD norms. It is estimated that water availability in normal season reflects the same in respect of various IPCD consumption standards whereas the water demand varies with each standard. The water deficiency in 90 IPCD standard lies in

16.01 (MM Litres), 110 IPCD in 40.87(MM Litres) and 135 IPCD 70.05 (MM Litres) in revealed from the analysis. The average total deficiencies of water in the normal season accounted for 42.87(MM Litres) is derived from the analysis.

With regard to summer season, the water deficiency goes on increasing with 90 IPCD, 110 IPCD and 135 IPCD, which share accounted for 36.81, 60.11 and 89.22 respectively to the total. The water deficiency during summer season accounted for the average total of 62.05 MM Ltr. The pooled data for both normal season and summer season accounted to the total of 52.46 (MM Ltr) water deficiencies are pertinent all through the year in Madurai city is inferred from the analysis.

Water Supply in Madurai City

The water supply particulars in respect of Madurai City are detailed in Table 2

Table 2 Details of Water Supply Sources in Madurai City

Sl.No.	Particulars	Quantity (in Nos.)
1.	Over-Head Tanks	23
2.	Hand Pumps	634
3.	Wells	412
4.	Bore wells	2,850
5.	Public Fountains	3,863
6.	Pumping Stations	7
7.	House service Connection: Domestic/Commercial/Industries	1,32,647

Source: Office Records, Madurai Corporation, Madurai, March, 2012.

It is evidenced that a total of 23 OHTs, 634 hand pumps, 412 wells, 2850 bore wells. 3,863 public fountains and 7 pumping stations are presently working to cater to the needs of 15 lakhs population of Madurai City. With these sources of water stations 1,32,647 are domestic, 3,190 are commercial and 203 are industries connections available to the people to meet out the water requirements every day.

Demand for Water

The level of demand in respect of drinking water and salt water per day by the sample households is presented in the Table 4.

Table 3 Demand for Potable and Salt Water by the Sample Households

(No. of Households)

Sl.No	Sample ward	Demand for water (Per day/in Ltr.)							
		Drinking water (in ltrs)				Salt water (in ltrs)			
		10	11-20	>20	Total	100	101-200	>200	Total
1.	B.B.Kulam	12	40	11	63	12	45	6	63
2.	Kochadai	18	51	19	88	18	51	19	88
3.	Narimedu	21	10	8	39	16	17	6	39
4.	K.K.Nagar	4	18	21	43	4	12	27	43

5.	Mariamman Teppakulam	12	19	10	41	12	19	10	41
6.	Villapuram Pudhu Nagar	16	18	15	49	14	31	4	49
7.	Sundarajapuram	14	17	24	55	18	31	6	55
8.	Jadamunikovil	14	22	18	54	12	36	6	54
	Total	111 (25.69)	195 (45.14)	126 (29.17)	432 (100.0)	106 (24.54)	242 (56.02)	84 (19.44)	432 (100.0)

Primary Data

The analysis on demand for water by the randomised sample households revealed that out of 432 households 111 demanded 10 litres of drinking water per day whereas 126 households demanded more than 20 litres of potable water per day to eake out their living. It is also evident that 195 households are consuming eleven to twenty litres of water for drinking purpose. Therefore, it is construed that two third of the sample households demanded more than 11 litres of drinking water per day in the study area.

With regard to salt water viz., underground water, it is highlighted that 242 households daily requirement of water for various purposes accounted for 101 litre to 200 litres per day. 84 households demanded more than 200 litres of salt water per day for their domestic use of family. Among the eight words, it is deduced that the demand for salt water is the highest in K.K.Nagar ward whereas it is lowest in Villapuram Pudhu Nagar Ward is derived from the analysis. In the case of drinking water, the quantum of water requirement is highest in Sundararajapuram ward and lowest in Mariamman Teppakulam ward. The demand for water in respect of salt and drinking water varies individually and collectively across different wards of Madurai Corporation.

The domestic ground water withdrawal by the sample households ranges from one time to three times in a day is found from the study area. There are 67.13 per cent of households whose water withdrawals lies only one time per day whereas 18.52 per cent withdrawals water from ground occurred for three times per day. Ground water withdrawals are largely done i.e., area daily (51.85 per cent) by the sample households.

Difference between Demand and Supply of Water

The gap between demand for water and supply of water by the sample households in respect of their drinking activity and salt water requirements per day is analysed and presented in Table 4

Table 4 Demand for and supply of water by the Sample Households

(in litre/per day)

Sl.No.	Sample Ward	Drinking Water per households			Salt Water per households		
		Demand	Supply	Demand and Supply Gap	Demand	Supply	Demand and Supply Gap
1.	B.B.Kulam	17	14	3	510	464.5	45.5
2.	Kochadai	18	18	0	480	415.7	64.3
3.	Narimedu	20	18	2	720	668.9	51.0
4.	K.K.Nagar	18	12	6	480	428.0	52.0
5.	Mariamman Teppakulam	16.5	16	0.5	620	543.0	77.0
6.	Villapuram Pudhu Nagar	17.5	15	2.5	610	520.0	90.0
7.	Sundarajapuram	14	10	4	510	457.2	52.8
8.	Jadamunikovil	15	11	4	545	470.0	75.0
	Average Total	17.00	14.25	275	559.37	459.91	63.46

Source: Primary data.

It is estimated that the demand for drinking water per household stood at an average of 17 litres per day whereas the supply of water accounts for only 14.25 litre per day. Therefore, the gap between demand and supply of potable water is estimated as 2.75 litres per day for a single household. Among the different sample wards, the demand for water is highest in Narimedu ward households whereas it is lowest in Sundararajapuram area. In Narimedu, most of the sample households are manual workers and infact they sweat their labour everyday as unorganized workers. It is to say that the supply of water is highest in Kochadai and Narimedu wards in Madurai City. The gap between demand and supply of drinking water is wide in Sundararajapuram and Jadamunikoil wards which account for 4 litres each per household in a day.

Likewise, the salt water demand and supply of water per household analysis shows that, the average demand for salt water is 559.37 litres per day by the each household is estimated from the analysis. The demand for salt water is maximum in respect of Narimedu ward households accounting to the total of 720 litres per day whereas it is minimum in Kochadai and K.K.Nagar wards. The gap between demand and supply of water is found to be maximum in Villapuram Pudhu Nagar accounting to the total of 90 litres per household per day.

It is a fact that the demand for water is always higher than supply of both drinking and salt water among the sample households in the study area. The gap between demand for and supply of salt water per household exists to the tune of 63.46 litres per

day among the sample households. No gap between demand for and supply of drinking water is noticed in Kochadai ward due to adequate presence of water in the region.

Access and Adequacy of Safe Drinking Water

Water provision adequacy and access by the sample households in the study area is presented in Table 5

Table 5 Accesses to and Adequacy of Safe Drinking Water Provision by Madurai Corporation

(No. of Households)

Sl.No.	Sample Ward	Accession		Total	Adequacy		Total
		Accessed	Un accessed		Adequacy	Inadequacy	
1.	B.B.Kulam	28	35	63	21	42	63
2.	Kochadai	34	54	88	31	57	88
3.	Narimedu	21	18	39	8	31	39
4.	K.K.Nagar	28	15	43	7	36	43
5.	Mariamman Teppakulam	29	12	41	19	22	41
6.	Villapuram Pudhu Nagar	16	33	49	22	27	49
7.	Sundarajapuram	24	21	55	24	31	55
8.	Jadamunikovil	29	25	54	27	27	54
	Total	209 (48.38)	223 (51.62)	432 (100.0)	159 (36.81)	273 (63.19)	432 (100.0)

Source: Primary data.

It is witnessed from Table 5 that out of 432 sample households only 209 have full access to safe drinking water provision by Madurai Corporation whereas 223 do not have an access to safe water in Madurai City. This is due to influx of various contaminants mix in Corporation water. Among the sample wards, highest number of sample households who have an access to safe drinking water is found in Kochadai ward (34) followed by Mariammal Teppakulam (29) and Jadamunikoil ward (20) in Madurai City. Safe drinking water provision to households needs through re-engineering and revisit of water quality assurance in the sample wards.

The provision of adequate safe drinking water among the sample wards found to be lesser than inadequate supply of water. Only 159 households are satisfied in respect of adequacy of safe drinking water provision by Madurai Corporation. 273 households are unhappy about the provision of water supply in the study area. Therefore, it is understood that both water adequacy and water accession by the sample households indicate the need for more water provision and quality assurance is expected by the sample households in Madurai City.

Table 6 Norms for measuring the levels of satisfaction of Water Provision and Assurance by the Households

Satisfaction Group	Standard scores of satisfaction
Highly Satisfied	66and Above
Satisfied	51-65
Average	31-50
Dissatisfied	16-30
Highly Dissatisfied	15 and above

Source: H.C. Ganguli (1994) job satisfaction levels of effective Managements, New Delhi, Concept, p.75

Table 6 shows the overall satisfaction scores of sample households in their housing premises regarding the indicated variables.

Table 7 Five Point Scale on Provision of Drinking Water Facility by Madurai Corporation

Sl. No.	Variables	Zone-I	Zone-II	Zone-III	Zone-IV
1.	Adequacy of water provision	81.00	46.60	80.60	58.60
2.	Easy to meet authorities	38.80	60.10	51.60	34.40
3.	Sufficient Frequency water provision	74.00	43.40	75.10	64.60
4.	Sufficient duration of water provision	72.10	41.30	71.70	61.70
5.	Ensures water quality index	41.20	50.40	44.70	57.40
6.	Hardness and Odur free	48.70	58.70	40.70	55.10
7.	Timing of water provision	55.60	68.00	64.70	54.10
8.	Easy access	63.60	50.10	60.60	49.90
9.	Pollution Free	37.60	48.80	54.50	48.40

Source: Primary data.

The above analysis expounds that zone-I sample households are highly satisfied with adequacy and frequency of water provision and sufficient duration of water supply by Madurai Corporation. In the case of purity, hardness, odour and water quality index their score is only average in respect of water.

With regard to zone II households, they are highly satisfied with timing of water provision by Madurai Corporation to houses. In the case of zone-III households, they are higher satisfied with frequency adequacy and duration of water provision. Zone-IV households are not highly satisfied with any of the water provisionary variables. It is noted that water quality index is rated only average level by Zone-I, Zone-II and

Zone-III sample households of Madurai City. Provision of water adequacy is to be taken care of by the local Government authorities. Provision, frequency and quality are the three dimensional aspects of water provision expected by Madurites. This could be ensured through better initiatives and sustenance methods of water conservation and management practices. It is mandatory to instill water consciousness and judicious use of water by the madurites by Governments.

Suggestions

Keeping the study objectives, the following suggestions are given to ensure effective reclamation, procurement, distribution and management of water resources in Madurai Corporation

1. The issues of rising demand for water accompanied by increasing water pollution like the discharge of domestic sewage from household sector is enormous in the study area.

2. *People in the study area lack access to clean and safe drinking water on the one side, insufficient bore well water availability is the problem of other side.* Balanced approach of matching the supply-driven menu with a set of demand driven activities should be framed for future

3. In recent years, various types of technology have proved popular across the world. With the help of these technologies, local governments can convert poor quality of water (sea water, ground water and sewage water) into safe and adequate water to local people, at a low cost. This type of technology transfer needs to be scaled up on a large scale to sustain demand management for ever.

4. Water-on –Call may be provided by Build-Own-Operate-Transfer (BOOT) based private agencies on procurement-treat supply on cost basis through mobile van can be encouraged with proper monitoring agencies.

5. Government should introduce user's pay principle in water resources. This would promote judicious and optimal use of water by urban population. Considering the financial and managerial limitations of government, part of the water resources development and management activities may be shared under 4P model (Public-Private-Panchayat-Partnership).

6. *The components of sewage water management, recycling, water consumption monitoring, and Rain Water Harvesting principles need to be imparted in the social systems. Water literacy can be created and sustained by local government among the individuals of the society.*

7. Government has to establish and introduce sustainability in the context of growing population and the need for an indigenous way of harmonizing the water resources needs to be profounded.

8. Transparent water resource distribution, regulation on private entry in water markets and increased awareness level of urban people are a three legged stool to ensure accession, inclusion and excellence principle in water.

Conclusion

Nature has gifted the earth with several resources for the benefit of all living organisms. Among them water is an important natural resource essential for the very existence of mankind, flora and fauna. Water is manageable and renewable resources capable of being diverted, stored and recycled. It is a single resource possesses competing uses. Water is essential for sustaining all forms of life, food production, economic development and well-being. It is impossible to substitute for most of its uses, difficult to de-pollute, expensive to transport and truly it is a unique gift to mankind from nature.

The average water consumption of sample households in different wards in Madurai is lower than the actual demand for water. Lower consumption is mainly due to supply constrains in the study area. Interestingly, in spite of such shortage most of the households expressed satisfaction over the water supply by

Madurai Corporation. Water markets have helped in reducing the inequalities in the accessibility of ground water resources, but in water scarce wards, principle of profit maximization is being followed by the sellers. Different strategies are adopted by state and local government to prevent looming water problem and restore sufficient provision of safe drinking water. It is essential to redefine and advocate the nationalization of ground water resource to achieve water rights for sustainable use of water.

A community based action is required for the efficient use of ground water. There is a need to shift from top-down delivery mode to demand-driven approach in the water sector as it is vital for sustainable provision and promotion of assured quality of water to the households of Madurai Corporation.

References

1. Amitabhkant, The greater challenge, The times as India, Thursday April 26, 2012, p.10
2. Siva Ram.P, Government initiatives in rural water supply prgrammes, Reforms and Bharat Nirman, kurukshetra, vol. 54, No 12, October 2006, pp. 28-35
3. Water Resources Development in India: Critical Issues and strategic option.
4. Prakash Nelliyat, water is the elixir of life, let us join hants to conservator , open page, The Hindu, Sunday March 31.2013, p.10.

5. Chandrashekar T.C (2009) "Water Crisis in India – Issues and implication" Agriculture Situation in Indina, p.74.

6. World Health Organization (2009) "Save water for survival" A report, p-24.

7. GOI (2008) water resources and water shed Management Department report, p.74.

8. UNICEP (2009) "Sustain the water for the survival of species on planer" A report, p. 26.

AN ECONOMIC ANALYSIS AMONG THE WOMEN SELF HELP GROUP MEMBERS THROUGH MICRO-CREDIT IN COMMERCIAL BANKS IN TAMILNADU IN INDIA

S.Niranjan Devi
PhD Research Scholar, PG & Research Deppartment of Commerce, Mannar Thirumalai Naicker College, Madurai, Tamilnadu

U.Arumugam
Assisitant Professor, Dept of Corporate Secretaryship, School of Management, Alagappa University, Karikudi, Tamilnadu

The innovative credit delivery system, namely micro-finance is a breakthrough in the world of finance. It changes the life of the poor, especially women, not only by providing financial services such as micro savings and micro insurance, but also imparting training in entrepreneurial development. Over the past few decades, microfinance institutions and programmes all over the world have adopted numerous innovative ways of providing credit to the economically poor entrepreneurs and augmenting their savings. These include the provision of small loans to the poor, especially in rural areas, at full-cost interest rates without collateral security and repayable in frequent instalments. Borrowers are organized into groups, which reduces the risk of default. Moreover effective mechanisms to disseminate valuable information on ways and means to improve the health, establish legal rights, get sanitation and other relevant concerns of the poor have been found out.

The term 'micro-credit' is perceived to be a Paradigm shift in the quality of delivery of finance to micro-entrepreneurs. The old paradigm of micro-finance envisaged providing credit to the poor basically residing in rural and semi urban areas at subsidized rates of interest through public or government financial institutions. The new micro-finance system continues to target the rural and urban poor household with emphasis on women borrowers, provision of finance for asset creation and on the principle of 'Borrower knows best' (Kaladhar, 1997).

The poor, especially women, have traditionally not been recognized as credit-worthy or savers of money and thus they are not perceived as a profitable market of credit. This forces them to fall into the vicious cycle of everlasting high interest and high collateral loan from money lenders. The sine quo non of any anti-poverty strategy is the irrepressible desire and innate capacity of the poor to uplift their economic conditions.

Therefore, a need arises for innovative credit delivery system that deviates from formal collateral oriented lending institutions to informal structures. It has been felt all over the world today that micro-finance can simultaneously help alleviation of poverty and empowerment of women.

Statement of the Problem

Since 1950, the Government of India has been trying various programmes to alleviate poverty. Studies show that these programmes implemented through banking institutions, are not fully successful in meeting their socio- economic objectives. The financial institutions here have not been able to reach the poor households particularly women in the unorganised sector. Structural rigidities and overheads lead to high cost in advancing small loans. Experience in implementing different anti-poverty and other welfare programmes has shown that the key to success lies in starting appropriate community-based organizations with their member's participation at the gross-root level. Moreover, the group approach is one of the effective ways to reduce poverty and difficulties of small businessmen and agriculturists. Realizing this importance of Micro–Credit through commercial banks in helping homemaking women's upliftment, the researcher has made a sincere and humble attempt to examine how far Micro–Credit has empowered them. The present study endeavors to analyse the impact of Micro Credit through commercial banks on the members of Self Help Groups and offer suggestions for the upliftment and empowerment of beneficiaries throughout Tamilnadu.

Objectives of the Study

The objectives of the proposed study are:
1. To analyse the system of micro credit.
2. To gauge the impact of microcredit on the economic development of the beneficiaries.
3. To test the attitude of the members of the Self Help Groups with reference to the economic , social , psychological and political impacts and
4. To suggest ways and means for effective and efficient functioning of Self Help Groups in Tamilnadu, India.

Methodology

Designing a suitable methodology and selection of suitable analytical tools are important for a meaningful analysis of any research problem. This section of the thesis is devoted to the description of the methodology which includes sampling procedure, period of study, collection of data and tools of analysis.

Tamilnadu comprises of 30 districts. For the purpose of collecting primary data, district-wise lists of beneficiaries have been obtained from the Project Office, District Rural Development Agency, Programme Officer, Tamil Nadu Corporation for Development of Women Ltd., (TNCDW) and Non-Government Organisations (NGOs) functioning in Tamilnadu. 350 sample beneficiaries have been selected at random from the all the districts proportionately. The study is an analytical one and comprises both primary and secondary data. The secondary data have been collected from publications, documents, annual reports, journals, magazines, books and periodicals. Data at the district level have been collected from the records of Women Development Department and Mahalir Thittam office in Tamilnadu

The selected respondents were contacted in person and the objectives of the study were clearly explained to them and their co-operation was sought. The details regarding the general categories of the sample respondents, their family characteristics, incomes, savings and the like relating to the overall objectives of the study were collected from them through direct personal interview method.

Tools of Analysis

In order to test the significant difference in the performance scores of different groups, based on tenure of existence, literacy level of the leader of the group and the size of the membership, the Kruskal-Wallis Test has been used.

$$H = \frac{12}{N(N+1)} \left(\frac{R_1^2}{n_1} + \frac{R_2^2}{n_2} + \ldots + \frac{R_k^2}{n_k} \right) - 3(N+1)$$

where

$n_1, n_2, \ldots n_k$ are the number in each of k samples

$N = n_1 + n_2 + \ldots + n_k$ and $R_1, R_2, \ldots R_k$ are rank sums of each sample.

To study the social impact of micro credit on SHG members, the factors like the level of self-confidence, behavioural changes and participation in social life have been taken into account. With a view to finding out whether there is any significant difference in social conditions of members between the period before and the period after joining the SHGs, the MC Nemar Test and the Sign Test have been used.

MC Nemar Test

Before Membership	After Membership	
	Do not favour	Favour
Favour	A	B
Do not favour	C	D

$$\chi^2 = \frac{(A - D - 1)^2}{(A + D)} \text{ with d.f.} = 1$$

Sign Test

$$K = \frac{n - 1}{2} - 0.98\,n$$

To study the economic impact of micro credit on SHG members and factors like value of assets possessed, level of income earned by members, their expenditure pattern and their level of savings before and after joining SHG have been considered.

To find whether there is any significant difference in the economic conditions before and after joining the SHGs, the Sign Test has been used. In order to analyse the perception of members on the impact of micro credit from SHGs, they were asked to respond to 21 statements using Likert's five point-scale starting from "Strongly Agree" (5) to "Strongly Disagree"(1). These 21 statements have been grouped under the following four categories:

i)   Economic Impact
ii) Social Impact
iii) Psychological Impact and
iv) Political Impact

The perception scores have been classified into three groups:

(i)   High perception: Scores above (Arithmetic Mean + Standard Deviation).
(ii) Moderate perception: Scores ranging from (Arithmetic Mean – Standard Deviation) to (Arithmetic Mean + Standard Deviation); and
(iii) Low perception: Scores less than (Arithmetic Mean – Standard Deviation).

During the data collection, the data has been taken to reduce recall bias through cross check, questions in interview schedule, the information furnished by the sample respondents may be subjected to recall bias is the only limitation of this study.

Measure of Perception on Impact of Micro Credit

In this study pertaining the members regarding the economic impact, social impact, psychological impact and political impact created by the SHGs has been analysed with the help of a scaling technique. For analysing each type of impact, the opinion of the members on five given statements has been elicited on a five-point scale. By consolidating the scores obtained by every sample member for each statement with the help of the five point scale viz SA – Strongly Agree (5), A – Agree (4), NO- No opinion (3), D.A., Disagree (2) and S.D.A. – Strongly Disagree (1), the total scores have been computed. The total scores secured by the sample 350 members show the

significance of each statement used to measure the economic impact, social impact, psychological impact and political impact. The total scores for the four categories of impact shows the level of significance of each category of impact from the standpoint of the sample members of the study. Besides the total scores, the mean, median, quartiles and standard deviation also show the level of perception of the respondents on various categories of the impact of the SHGs. The perception of sample members on the four categories of impact such as economic impact, social impact, psychological impact and political impact has been measured with the help of scores allotted to five statements related to four categories of impact on a five point scale. The detailed analyses of the statement, individual scores and total scores have been elucidated below.

Perception of Economic Impact

Positive economic impact is the vital aspect of one's development. The Self Help Groups help their members to improve their economic conditions. The improvement in economic conditions is seen through increase in savings, value of assets, quantum of borrowing and expenditure and provision of employment opportunities. The perception of the sample members on the economic impact has been ascertained by taking into account the opinion of the members on the economic variables such as the capacity to spend more, increase in value of assets, rise in income, improvement in the savings habit and provision of employment opportunities.

Table 1 shows the opinion of 350 sample members on economic impact.

Table 1 Perception of Members About Economical Impact

Sl. No.	Proposition	S.A.	A	N O	D.A.	S.D.A.	Total Scores
1.	Increase in the capital after getting microcredit	150 (42.90)	159 (45.40)	12 (3.40)	15 (4.30)	14 (4.00)	1466
2.	Increase in the annual income after getting microcredit	98 (28.00)	190 (54.30)	13 (3.70)	28 (8.00)	21 (6.00)	1366
3.	Increase in the educational expenditure after getting microcredit	133 (38.00)	217 (62.00)	--	--	--	1533
4.	After getting microcredit the quality of food is improved	71 (20.30)	207 (59.10)	31 (8.90)	--	41 (11.70)	1317
5.	Increase in the savings pattern after getting microcredit	28 (8.00)	106 (30.30)	175 (50.00)	--	41 (11.70)	1130
6.	After getting microcredit the productive asset is increased	42 (12.00)	208 (59.40)	31 (8.90)	69 (19.70)	--	1273
7.	After getting microcredit availability of credit source is increased	--	134 (38.30)	94 (26.90)	122 (34.90)	--	1062
							9147

Note: S.A- Strongly Agree, A – Agree, N.O. No Opinion, D.A. – Disagree, S.D.A. Strongly Disagree.

It is found from Table 1 that the perception of members on the statement that the 'Increase in the educational expenditure after getting micro credit' gets the maximum score followed by the statement that 'Increase in the capital after getting micro credit'. The statements that the 'Increase in the annual income after getting micro credit', 'After getting micro credit the quality of food is improved', 'After getting micro credit the productive asset is increased', 'Increase in the savings pattern after getting micro credit' and 'After getting microcredit availability of credit source is increased' occupy the third, fourth, fifth, sixth and seventh places respectively.

Perception on Social Impact

SHGs create social awareness among the members. The perception on the social impact is measured with the help of statements like social responsibility. Strength to protest against social evils, power of decision-making on important matters, awareness about health and knowledge of banking operations.

Table 2 shows the perception of members on the social impact of SHGs

Table 2 Perception of Members on Social Impact

Sl. No.	Statements	S.A.	A	N O	D.A.	S.D.A.	Total Scores
1.	Getting Recognition in domain	73 (20.90)	277 (79.10)	--	--	--	1473
2.	Getting Recognition in the society	31 (8.90)	319 (91.10)	--	--	--	1431
3.	Chance of interaction with outsiders	76 (21.70)	214 (61.10)	60 (17.10)	--	--	1416
4.	Improvement of literacy / education	28 (8.00)	322 (92.00)	--	--	--	1428
5.	Improvement of family welfare awareness	28 (8.00)	255 (72.90)	67 (19.10)	--	--	1361
6.	Participation in development programmes	203 (58.00)	147 (42.00)	--	--	--	1603
7.	Improved quality of life style after getting the credit	32 (9.10)	144 (41.10)	111 (3.80)	63 (18.0)	--	1195
							9907

Note: S.A- Strongly Agree, A – Agree, N.O. No Opinion, D.A. – Disagree,
S.D.A. Strongly Disagree.

It is observed from Table 2 that the perception of the statement 'Participation in development programmes' occupies the first place scoring the intensity value of 1603. The statements such as 'Getting Recognition in domain', 'Getting Recognition in the society', 'Improvement of literacy / education', 'Chance of interaction with outsiders',

'Improvement of family welfare awareness' and 'The quality of life style after getting the credit' occupy the second, third, fourth, fifth, sixth and seventh places respectively.

Perception on Psychological Impact

The SHG provides scope for development of the body and mind of an individual. The mind accelerates the activities of the member and hence the psychological impact on the members has been analysed. The psychological impact constitutes improving confidence, awareness on self-reliance, societal status, awareness of cleanliness and improving literacy and communication skills.

Table 3 shows the perception of members on the psychological impact of members.

Table 3 Perception of Members on Psychological Impact

Sl. No.	Statements	S.A.	A	N O	D.A	S.D.A.	Total Scores
1.	Getting decision making power	28 (8.000)	182 (52.00)	59 (16.90)	81 (23.10)	--	1207
2.	Improvement of employment and communication skills	32 (9.10)	277 (79.10)	41 (11.70)	--	--	1391
3.	Creation of problem solving capacity	28 (8.00)	221 (63.10)	73 (20.90)	28 (8.00)	--	1299
4.	Creation of awareness for better clean environment	32 (9.10)	178 (50.90)	64 (18.30)	16 (4.60)	60 (17.10)	1156
							5053

Note: S.A- Strongly Agree, A – Agree, N.O. No Opinion, D.A. – Disagree,
S.D.A. Strongly Disagree.

It is illustrated from Table 6.3 that the perception of sample members of the statement that 'Improvement of employment and communication skills' occupies the first place with scores of intensity value of 1391 followed by the statement such as 'Creation of problem solving capacity', 'Getting decision making power' and 'Creation of awareness for better clean environment' occupy the second, third, and fourth places respectively.

Overall view of the Perception Scores

To ascertain the significance of the four categories of impact the average, median, first quartile (Q1), third quartile (Q3) and Standard Deviation have been calculated. Table 4 shows the details of the perceptions of the respondents of the various kind of impact.

Table 4 Details of Perception Scores of Respondents for Various Impact

Sl.No.	Various Impact	Mean		C.V
1.	Economic	26.13	3.10	11.86
2.	Social	28.31	1.52	5.37
3.	Psychological	14.32	2.56	17.88
4.	Overall	68.76	5.48	7.97

It is evident from Table 4, that the perception of the sample members of social impact occupies the first place (mean 28.31 and Standard Deviation 1.52) followed by perception of psychological impact. The perception of economic impact and psychological impact occupies the second and third place respectively. This indicates the positive motivation required for psychological impact of the members of SHGs in Tamilnadu

Extent of Perception of Various Impacts

With a view to finding out the extent of the perception of the sample members of economic impact, social impact, psychological impact, political impact and overall impact, the average scores and standard deviation have been computed. The extent of perception falls under three categories low, medium and high.

Low Below (Arithmetic Mean - Standard Deviation)

High Above (Arithmetic Mean + Standard Deviation)

Medium From (Arithmetic Mean – Standard Deviation)

To (Arithmetic Mean + Standard Deviation)

The overview of the respondents' perception scores of impact is depicted in Table 6.6.

Table 5 Overview of Respondent's Perception Scores for Various Impacts

Sl.No.	Various Impact	Low	Medium	*High*
1.	Economic impact	60 (17.14)	211 (60.29)	79 (22.57)
2.	Social impact	28 (8.00)	221 (63.14)	101 (28.86)
3.	Psychological impact	48 (13.71)	231 (66.00)	71 (20.29)
4.	Overall impact	75 (21.43)	224 (64.00)	51 (14.57)

It is clear from Table 6.6 that the perception of a majority of sample members of economic impact, social impact and psychological impact falls under the medium category. With regard to overall impact 224 (64.00 per cent) members fall in the medium perception category, 51 (14.57 per cent) fall in the high perception category and 75 (21.43 per cent) fall in the low perception category.

Personal Variables and Impact

In order to find out the relationship between personal variables and the perception of impact, the Kruskal Wallis one way ANOVA was test.

Age and Impact Perception Score

To test the null hypothesis that there is no significant difference in the perception scores of impact among different groups of members classified according to age, the Kruskal Wallis Test has been applied. The result of the test is depicted in Table 6

Table 6 Relationship between Age and Perception Score - Kruskal Wallis Test

Sl.No.	Category of Impact	H value	Level of Significance	Result
1.	Economic	17.53*	0.000	S
2.	Social	18.09 *	0.000	S
3.	Psychological	23.47*	0.000	S
4.	Overall	19.22*	0.000	S

*Significant at 5 per cent level.S – Significant.

It could be observed from Table 6 that there is significant difference in the perception scores of the sample members in respect of economic, social and psychological impacts. It indicates that age influences the economic, social and psychological impacts. With regard to overall impact, the value of level of significance is less than 0.05, the null hypothesis is rejected. Hence it is concluded that significant difference exists in the perception scores among the groups according to age. It means that age influences the overall perception scores of the members who have availed of micro credit.

Caste and Perception Scores of Impact

In order to test whether there is any relationship between the community and the perception scores of impact, the Kruskal-Wallis test has been applied to verify the following null hypothesis. There is no significant difference in perception scores of the impact among different groups of members based on community. The results are shown in Table 7

Table 7 Relationship between Caste and Perception Score – Kruskal Wallis Test

Sl.No.	Category of Impact	"H" Value	Level of Significance	Result
1.	Economic	13.79*	0.001	S
2.	Social	2.19	0.334	NS
3.	Psychological	103.76*	0.000	S
4.	Overall	46.86*	0.000	S

*Significant at 5 per cent level.   S – Significant NS – Not Significant.

It is observed from Table 6.9 that there is a significant difference in perception scores among different groups according to community for economic, psychological and overall impacts except social impact. With regard to overall impact, the value of level of significance is less than 0.05, and thus the null hypothesis is rejected. Hence it is concluded that the caste has an influence on the perception of members on impact.

Marital Status and Perception Scores

In order to test the null hypothesis that there is no significant difference in the perception scores among different groups based on marital status, the Kruskal – Wallis test has been used and the resultes are presented in Table 8

Table 8 Relationship between Marital Status and Perception Score - Kruskal Wallis Test

Sl.No.	Category of Impact	"H" Value	Level of Significance	Result
1.	Economic	9.29	0.009	S
2.	Social	4.32	0.115	NS
3.	Psychological	38.41	0.000	S
4.	Overall	13.30	0.001	S

*Significant at 5 per cent level. S – Significant NS – Not Significant.

It is depicted from Table 8 that there is a significant difference in perception scores among different groups according to their marital status of the members for economic, psychological and overall impacts except social impact. With regard to overall impact, the value of level of significance is less than 0.05, which rejects the null hypothesis. Hence it can be concluded that the marital status has an influence on the perception of members on impact.

Education and Perception Scores of Impact

In order to test whether there is any relationship between literacy level and perception scores the following hypothesis has been framed. There is no significant difference in the perception scores of impact among the different groups based on the level of literacy.

The results of the Kruskal-Wallis Test are shown in Table 9

Table 9 Relationship between Education and Perception Score Kruskal Wallis Test

Sl.No.	Category of Impact	"H" Value	Level of Significance	Result
1.	Economic	71.24	0.000	S
2.	Social	2.26	0.520	NS
3.	Psychological	68.65	0.000	S
4.	Overall	79.13	0.000	S

*Significant at 5 per cent level. S – Significant NS – Not Significant.

Table 9 portrays that there is a significant difference in perception scores among different groups according to their educational status of the members for economic, psychological and overall impact except social impact. With regard to overall, the value of level of significance is less than 0.05, the null hypothesis is rejected. Hence it is concluded that the educational status influences the perception of members on impact.

Conclusions and Suggestions

It is inferred that before joining SHGs only 34 (9.70 per cent) members had the positive response whereas 332 (94.90 per cent) members have show positive response in helping neighbours after joining them. This shows that association with SHGs induces helping tendency among the members of SHGs in Tamilnadu. Regarding the Mc Nemer test, it is found that the calculated values of the chi-square for self-confidence are significant at 5 per cent level and the value of level of significance is less than 0.05 resulting in the rejection of the null hypothesis. Hence it can be concluded that there is significant difference in self-confidence among the sample members before and after joining the SHGs in Tamilnadu It is understood that only 30 (8.60 per cent) members took decision as to house building, education of children and buying of household articles by themselves before joining SHGs while 334 (95.40 per cent) members have taken decision as regards the above.

It is revealed that only 26 (7.40 per cent) members took part in taking decision relating to marriage of their girls before joining SHGs while 328 (93.70 per cent) have taken part in deciding it. It is found that only 20 (5.70 per cent) members took part in taking decision relating to marriage of their boys before joining SHGs while 332 (94.90 per cent) of them have taken role in decision relating to it. It comes to light that before joining SHGs only 99 (28.30 per cent) did join in taking decision relating to their children's education while 325 (92.90 per cent) have shown positive response after joining SHGs in taking decisions by themselves with regard to the children education. It could be seen only 76 (25.3%) members showed positive response before joining SHGs while 248 (82.7%) have shown positive response after joining them.

It is observed that average a member saved Rs.3136.56 on an average annually before joining SHG. After joining the SHG, this has increased to Rs.6116.60. The major agencies with which savings were deposited are chit funds and commercial banks before and after joining the SHG. The savings with banks has recorded an increase in savings after the formation of the SHGs. The members of SHGs have also started depositing the savings with post offices.

It is found that 232 (66.28 per cent) sample members could save only up to Rs.2000 before joining SHG whereas 98 (28.00 per cent) members could save up to Rs.2000

after joining the SHGs. This shows an increase in the savings of the members.It is shown that the employment of members which works out to 257 man days has increased to 355 man days a year after becoming members of SHG. Thus 98 man days have increased because of their joining SHG. While 128 (49.80 per cent) man days of employment were generated by agriculture based activities before they became members of SHGs, 162(45.64 per cent) man days have been generated after they became as members of SHG.It is found that before becoming members SHG in the SHGs, 13.30 per cent of the households had less than Rs.25000 a year whereas after becoming members of SHG there is no household in that income category a year. This indicates that there is substantial increase in the income of the households.

It is revealed that the expenditure of 17 (4.85 per cent) members is less than Rs.5000, whereas none of the members falls under this category after joining SHGs. It also shows that the expenditure of 45 (12.86 per cent) members was in the category of Rs.10001-15000 after they became members of SHGs whereas 32 (9.15 per cent) members incurred has expenditure of Rs.10001-15000 and above before becoming members of SHGs.

It is understood that the consumption expenditure per year for a member was Rs.4513.25 before becoming a member of SHG whereas it is Rs.9652.55 after becoming a member of SHG. It also shows that the expenditure on food accounted for Rs.1172.85 (25.99 per cent) before their becoming members of SHGs, while it was Rs.4155.14 (43.06 per cent) after their becoming members of SHGs. The proportion of expenditure on clothing, education, health and festivals increased after their becoming members of SHG's, when compared to those of non-members of SHGs.

In the light of the above discussion and findings, the following suggestions are made:

It is suggested that the NGOs should be prevented from interfering with the SHG movement. Steps should be taken to keep them as voluntary organizations. They should not be allowed to use extraneous influences.

Savings by the members is one of the main indicators of economic development. So, the banks and post offices should introduce attractive, user – friendly schemes to encourage the saving habit among the members of SHG.

The SHG entrepreneurs face the problem of marketing their products. Arrangements should be made to market the products through Public Distribution System (PDS) efficiently and effectively.

SHG women are more poverty sticken and have experienced its effect in society. Since they themselves fight against poverty by being members of SHG and move upwards from below poverty line, in future, the poverty alleviation programmes can be implemented through SHGs, They can monitor themselves effectively, with all enthusiasm and involvement.

A growing unhealthy competition is visible between Mahalir Thittam approved NGOs and other SHGs promoted by NGOs in the study area. Such unhealthy competition must be removed; otherwise it will spoil the entire concept of the programme. For this, the area or villages can be clearly segregated and only one participation agency should be permitted in a village.

Overlapping and dual memberships should be avoided and mobility should not be encouraged among the SHG members between the groups.

The training system should link up with some kind of credit delivery mechanism whether formal or informal. It is suggested that more number of groups should be linked with the banks so that their credit support would be strengthened.

Institutional credit facility must be extended to women to develop their managerial skill for prompt repayment consciousness.

Micro – Finance should be used to meet the immediate demand of the poor women – for Health, Education or consumption purposes. This will improve the quality of their life and will be ready to take active participation in economic activities.

Exposure visits to other successful groups can be organized to share the knowledge, experience and expertise.

Annual plans for SHG activities should be done by the group consulting the NGOs. Group leaders from different villages can meet monthly once and present the progress of their groups.

Income generating activity should be based on available local resources and a reasonably assured market with profits.

The NGOs can provide some common services to the Self – Help Groups for procurement of raw materials, marketing etc.,

Among all the sectors, agricultural sector lacks behind in earning income. This sector can engage them in contract farming and cultivate profitable crops..

Combined group activism with social participation may be encouraged through imparting training and motivation to animators on the concepts like group cohesiveness, basic maintenance of records and success stories of other groups.

The facilitators like NGOs, and banks should communicate information to start self employment in the field which provides ample opportunities for income generation with the locally available raw materials.

Though these groups have made a positive impact on SHG women, SHG members suffer from lack of motivation, backward and forward linkages.

References

1. Christabell. P.J.,, "Women Empowerment through Capacity Building", The Role of Micro-Finance, University of Kerala, 2003.
2. Dunkley, Graham, People for Change: A Study of four CCA Projects in India Melbourne: Department of Applied Economics, Victoria university of technology and community aid Abroad/Freedom from hunger, 1993.
3. Morduch, J and Haley, B., Analysis of the effects of Microfinance on Poverty Reduction, CIDA, Ottawa, 2001.
4. Murthy. R.K., Raju, K. and Kamath, A., Towards Women's Empowerment and Poverty Reduction, Lessons from the participatory Impact Assessment of South Asian Poverty alleviation programme in Andhra Pradesh, India, mimeo, 2005.
5. Pandmini Sengupta, The Study of Women in India, New-Delhi, Indian Book Company, 1974.
6. Arif Hasan and Mansoor Raza From Micro-finance to the Building of Local Institutions: The Evolution of Micro-credit Programme of the OPP's Orangi Charitable Trust, Karachi, Pakistan, Oxford University Press, OUP Catalogue. UK, 2012.
7. Samanta, R.K., Empowering Rural Women Issues and Opportunities and Approaches", Published by the Women Press, Delhi, 2005.
8. Samirendra Nath Dhar, Micro–Finance for Women, Northern Book Centre, New Delhi, 2005.
9. Shirvastava, Feminised Women Empowerment, Rawat Publications jupal and New Delhi, 2001.
10. Todd, Helen, Women at the Centre: Grameen Bank Borrowers after one Decade, Oxford: West View Press, New Delhi, 1996.
11. Gangaiah, C, B. Nagaraja, Vasudevulu Naidu, C., "Impact of SHGs on Income and Employment", Kurukshetra, Vol.54, No.5, March 2006.
12. Goetz, A M and Sen Gupta, R., 'Who takes the credit? Gender, Power and Control over loan use in Rural Credit Programmes in Bangladesh", World Development, Vol.24 (1), 1996.

ACORUS CALAMUS LEAVES EXTRACT AS CORROSION INHIBITOR A GREEN APPROACH

S. K. Selvaraj & K. Karthik Kumar
PG and Research Department of Chemistry,
G.T.N Arts College, Dindigul Tamil Nadu, India

Abstract

The anti-corrosion behavior of Acorus Calamus (AC) leaves extracts in Sea water solution on mild steel werestudied using electrochemical method (potentiodynamicpolarisation) and scanning electron microscope (SEM) techniques. The extracts were shown to have good inhibition efficiencies for the electrochemical method. Synergistic effect exists between the Acorus Calamus - Zn^{2+} system in controlling the corrosion of mild steel immersed in sea water in the absence and presence of Acorus Calamus. The formulation consisting of 200 ppmAcorus Calamus, 30 ppm of Zn^{2+} have 95% inhibition efficiency. A more stable and compact protective film formed on the metal surface. Polarization study reveals that the Plectranthus Amboinicus- Zn^{2+}system function as anodic inhibitor. The FT-IR and SEM analysis reveal that the protective film is formed on the metal surface.
Keywords: Acorus Calamus,corrosion inhibition, mild steel, Polarization, FT-IR and SEM.

Introduction

Corrosion is a natural process and defined as the detoriation of metal by electrochemical reactions with its environment. The corrosion of a metal can be defined as its reaction with the surrounding environment, which in this case is a liquid (the recirculated water). "It is better to eliminate rather than to prevent corrosion, since it is impossible to eliminate corrosion". The use of inhibitors was one of the most practical and efficient methods for protection against corrosion [1]. Corrosion inhibitors are substances added in very small concentrations that they effectively reduce the corrosion rate.There has been extensive research done to develop inhibitors that are cost effective and environmentally friendly. Most of the inhibitors developed from natural sources such as plants contribute greatly to inhibition of corrosion via various mechanisms. Acorus calamus also called sweet flag or calamus, among many common names is a tall perennial wetland monocot of the Acoraceae family, in the genus Acorus [2].

Experimental Techniques
Preparation of Specimen

Mild steel specimen [0.0267 % S, 0.06 % P, 0.4% Mn, 0.1 % C and the rest iron] of dimensions 1.0 cm × 4.0 cm × 0.2 cm were polished to a mirror finish and degreased with trichloroethylene.

Preparation of Extract

The Acorus calamus were collected, dried and pulverized well. About 5g ofthe powdered rhizomes were soaked in 60ml ofethanol. It was left for 24 hours so that, alkaloids, terpenoids and other constituents dissolved. Theethanol extract was filtered using the 0.2micronsyringe filter [3].

Table 1 Phyto-Components Identified in the Ethanolic Extract of the Rhizome of Acorus Calamus

NO	RT	Name of the Compound	Molecular Formula	MW	Peak Area %
1	10.45	Benzene, 1,2-dimethoxy-4-(2-propenyl)-	$C_{11}H_{14}O_2$	178	1.15
2	11.54	Shyobunone	$C_{15}H_{24}O$	220	2.11
3	12.04	A Asarone	$C_{12}H_{16}O_3$	208	1.83
4	13.17	B Asarone	$C_{12}H_{16}O_3$	208	71.51
5	14.39	7-Tetracyclo[6.2.1.0(3.8)0(3.9)]undecanol, 4,4,11,11-tetramethyl-	$C_{15}H_{24}O$	220	0.65
6	14.62	Trimethoxyamphetamine,2,3,5-	$C_{12}H_{19}NO_3$	225	0.91
7	15.14	Pyrimidin-2-one, 4-[N-methylureido]-1-[4-methylaminocarbonyloxymethyl]	$C_{13}H_{19}N_5O_5$	325	0.33
8	15.80	4a,7-Methano-4Ah-naphth[1,8a-b] oxirene,octahydro-4,4,8,8-tetramethyl-	$C_{15}H_{24}O$	220	0.28
9	20.18	n-Hexadecanoic acid	$C_{16}H_{32}O_2$	256	5.23
10	24.01	9,12-Octadecadienoicacid	$C_{18}H_{32}O_2$	280	16.00

Electrochemical Study

Polarization studies were carried out with a CHI-electrochemical workstation with impedance model 660A. A three-electrode cell assembly was used. The working electrode was mild steel. A saturated calomel electrode (SCE) was used as the reference electrode and a rectangular platinum foil was used as the counter electrode.

Surface Examination Study

The mild steel specimens were immersed in various test solutions for a period of one day. After one day, the specimens were taken out and dried. The nature of the film formed on the surface of the metal specimen was analysed by Scanning Electron Microscopy.

Results and Discussion
Potentiodynamic Polarization Study

Polarization study has been used to detect the formation of protective film on the metal surface [8]. The polarization curves of mild steel immersed in various test solutions are shown in Fig 1. It shows that there is a clear reduction of both anodic and cathodic currents in the presence of AC-Zn^{2+}compared with those for the blank solution. Hence, it is clear that the cathodic reaction (oxygen reduction) and the anodic

reaction (iron dissolution) were inhibited. The electrochemical parameters such as corrosion potential (E_{corr}), corrosion current density (I_{corr}) and Tafel slopes (b_c-cathodic and b_a-anodic) are given in Table 2.

Table 2 Analysis of Potentiodynamic Polarization Study

System	E_{corr} (mV vs SCE)	b_c (mV/dec)	b_a (mV/dec)	I_{corr} (A/cm²)	I.E (%)
Sea water	-724	135.54	194.48	7.977×10^{-6}	–
Sea water + 100 ppm AC + 30 ppm Zn^{2+}	-584	117.95	121.43	1.102×10^{-6}	86
Sea water + 200 ppm AC + 30 ppm Zn^{2+}	-518	115.59	309.31	0.434×10^{-6}	95
Sea water + 300 ppm AC + 30 ppm Zn^{2+}	-581	111.19	54.86	0.459×10^{-6}	94

When mild steel is immersed in seawater, the corrosion potential is -724 mV Vs SCE. The formulation consisting of 200 ppm AC + 30 ppm Zn^{2+} shifts the corrosion potential to -518 mV Vs SCE. It shows that the corrosion potential is shifted to more negative side. This indicates that the anodic reaction is controlled predominantly.
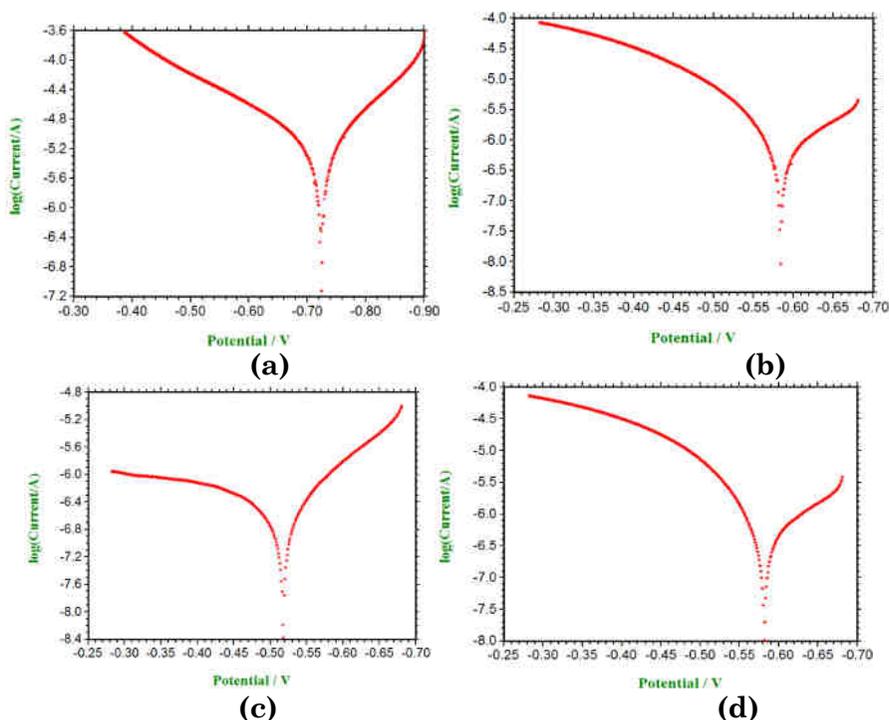
Figure 1 Polarization curves of mild steel immersed in various test solutions

(a) Sea water
(b) Sea water + 100 ppm AC + 30 ppm Zn^{2+}

(c) Sea water + 200 ppm AC + 30 ppm Zn^{2+}

(d) Sea water + 300 ppm AC + 30 ppm Zn^{2+}

The corrosion current density value for seawater is 7.977×10^{-6} A/cm^2. For the formulation of 200 ppm AC and 30 ppm Zn^{2+}, the corrosion current density value has decreased to 0.434×10^{-6} A/cm^2. The fact that the decrease in corrosion current density indicates adsorption of the inhibitor on the metal surface to block the active sites and inhibit corrosion and reduce the corrosion rate with the formation of a protective film on the metal surface [4].

Scanning Electron Microscopy (SEM)

The scanning electron micrographs of mild steel are shown in Fig 1. The SEM micrograph of polished mild steel surface (control) is shown in Fig 1a. This shows the smoothness of the metal surface. This implies the absence of any corrosion product formed on the metal surface. The SEM micrograph of mild steel immersed in seawater is shown in Fig 1b. This shows the roughness of the metal surface by the corrosive environment and the porous layer of corrosion product is present. Pits are observed on the metal surface. Fig 1c shows that the presence of 200 ppm of AC and 30 ppm of Zn^{2+}in seawater gives the formation of thick films on the mild steel surface. This may be interpreted as due to the adsorption of the inhibitor on the metal surfaceincorporating into the passive film in order to block the active site present on the mild steel surface [4].
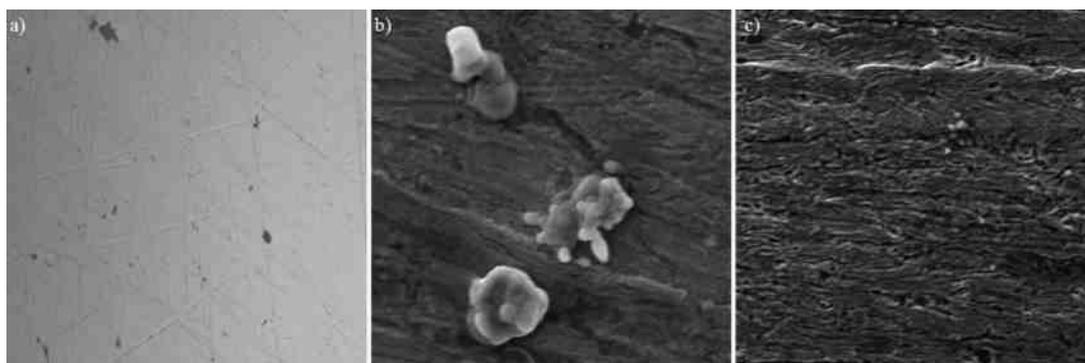

Figure 4 SEM images of mild steel surface (a) Polished metal (b) Sea water (c) Sea water+ 30 ppm of Zn^{2+} + 200 ppm AC

Mechanism of Corrosion Inhibition

In order to explain the above results, the following mechanism of corrosion inhibition is proposed [4]: When mild steel is immersed in sea water, the anodic reaction is,

$Fe \rightarrow Fe^{2+} + 2e^-$

The corresponding cathodic reaction is reduction of oxygen to hydroxyl ions,

$O_2 + 2H_2O + 4e^- \rightarrow 4OH^-$
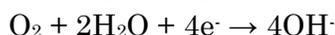
When the formulation consists of 200 ppm of AC and 30 ppm Zn^{2+} in seawater, there is formation of AC – Zn^{2+} complex in solution.

When mild steel is immersed in this environment, the AC – Zn^{2+} complex diffuses from the bulk of the solution to the metal surface. The AC – Zn^{2+} complex is converted into AC – Fe^{2+} complex on the anodic sites of the metal surface, the stability of Fe^{2+} – AC complex is higher than the corresponding Zinc complex.

$Zn^{2+} – AC + Fe^{2+} \rightarrow Fe^{2+} – AC + Zn^{2+}$
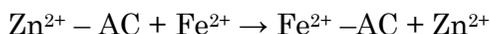
The released Zn^{2+} combines with OH- to form $Zn(OH)_2$ on the cathodic sites of the metal surface.

$Zn^{2+} + 2OH^- \rightarrow Zn(OH)_2$
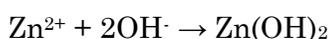
The protective nature of the film is due to the presence of metal inhibitor complex and Zinc hydroxide. Formation of the metal inhibitor complex fills the pores of the otherwise porous film and makes it a protective film.

Thus, the protective film consists of Fe^{2+} – AC complex and $Zn(OH)_2$.

Conclusion

The Electrochemical study reveals that the formulation consisting of 30ppm of Zn^{2+} and 200ppm of AC has 95% inhibition efficiency, for one-day system show that the anodic reaction is controlled predominantly indicating the reduction of resolution metal as more AC molecules are transported to the anodic sites in the presence of Zn^{2+} ions.

SEM confirms the presence of a protective film on the metal surface.

References

1. G.Wranglen, London, U.K:Chapman and Hall, (1985) 236.
2. Sylvan T. Runkel; Alvin F. Bull, Wildflowers of Iowa Woodlands. Iowa City, Iowa: University of Iowa Press. (2009) p. 119.
3. S.Senthil Kumar*, A. Soban Akram, T.S. Fareed Ahmed, M.S. Mohamed Jaabir, Oriental Journal of Chemistry Vol. 26(1) (2010) 223-227.
4. M. Dhanalakshmi, V. Mahalakshmi, K. Karthik Kumar, S. K. Selvaraj, A. John Amalraj, Int. J. Comp. Sci. Engg. &Tech. – Volume 3, Issue 1(2017) 1-6.

MANAGING SELF, SYSTEM AND SOCIETY: LESSONS FROM NATURE

Dr G. Grace Lydial Pushpalatha
Associate Professor in Botany,
Sri Meenakshi Govt. Arts College for Women, Madurai

Abstract

Nature presents itself as a wholesome entity with a manifold picture of opportunities and struggle for each species. Unraveling episodes from the human point of view can only present a part and distorted idea about the real relationship that exists. Anthropocentric approaches may be necessary for development and progress but it may not be the be all and end all. Managerial skills born out of human intellect can provide for achieving a fixed objective, though subsistence and sustenance can be assured only through a holistic outlook. Individuals, social groups and communities or species as such weave their own stories of survival and this can be comprehended completely only through a thorough organic approach. This paper suggests that our attempts of management for development in our academic institutions calls for a thorough appreciation of relationships between partners in the progress that the stakeholders requirement and expectations are realizable if alone the real needs and the felt expectation are deciphered and to do this one must be willing to learn from the models and systems that exit in nature.

Introduction

Management is an art and science as well. One who is passionate about self, system and society can be a good manager and leader. George Bernard Shaw has said *"It is not what we know we don't know hurts, it is what we don't know we don't know"*. Anthropocentric thinking has always constricted our vision and has protracted our ability to understand our problems. Eventually we are constrained in dealing with the issues that we face and handle in our life. The situation gets worsened when we allow ourself to be hijacked by popular notions spared and spread through orchestrated campaigns and bewildering experiences brought to us by market forces. We are robbed of our reasons at individual level and swept off our feet even as cohesive groups and as nations. Unable to comprehend the dire necessities and real needs, with misplaced priorities we err in taking right decisions and end up subscribing or managing situations by getting carried away form media and market forces.

Mounting pressures of the trans-global business and the shameless and borderfree profit seeking drives strangulate progress and make development lopsided. Developing countries and smaller economies are baffled to find themselves struggling with compulsions to match their schemes with advanced economies. The crushed third world reels under enormous peer pressure to be ranked alongside with others in the industrialized world and get nowhere. Narrow parochial interests, ethnocentric and regio-centric thinking in these less privileged entities make them run offbeat. Erosion

of time honored values, corruption, lack of commitment and illusion created with vested interests eclipse principle centered development. Visible absence of long term vision creates a vacuum in both planning and execution.

Management is a Strategy and Necessity

Balanced mind knows that only geocentric and polycentric approaches are maintainable and sustainable. Unkind business motives, cost avaricious plans conceived only on economic plank choke the value systems to the extent that humane approaches practiced by our ancestors in this land and elsewhere are gone once in for all and there is utter disregard for pluralistic values aimed at harmonious coexistence. Nature provides classic illustrations on how individual beings can organize as groups and systems and how a system can work as a self-contained unit with its constituents poised in balance. Such an objective, eco-centric analysis can certainly go beyond bias in answering questions of *Struggle for Existence and Survival of the Fittest* as Darwin has said and *Survival of the Fitting* as Kennth Boulding has remarked (Mohan Thite, 2004).

The world around us appears polluted and we have sadly learnt to adjust with dirt and filth. Instances of acid rain, ozone depletion, global warming, soil-air-water contaminations, threatening emission standards, biomagnifications, e-wastes, thermal and noise pollutions have certainly taken away the charm of living in harmony with nature. False prescriptions of modernity and civilization make us believe that adjustments with the speed of life in terms of digitalization and monetary dimensions alone can be the benchmark of our growth. We end up blaming each other and resort to cut-throat approaches adding more misery to life. Knowing that ill cannot correct ill, we continue to rectify damages caused by human excesses with newer forms of commissions having glaring omissions. We fail to understand that falling standards in our life support system and life expectancy as well is largely self inflicted (Senge et al., 1994).

Need to be Cautious

Often we fail in understanding our real needs and we tend to give priority to our made-up and projected needs by turning victims of market driven notions. The basic flaw is that we get carried away with ideas born out of the greed of industrial houses. Seldom do we take time to acknowledge that human beings have coexisted with nature for several thousand years before trying to break apart to control and exploit nature, especially during the agricultural and industrial economies. Ironically this realization in the midst of our extended and expanded capabilities to handle things with information and technology has hardly brought in any change with our ways of

exploiting nature. We arrogate so much and we assume that we can influence nature and control our environment. We have evolved our ego to the extent that we consider our happiness is separate from the happiness of those around us, not to mention there is scant respect for other all elements of nature (Senge, 1990).

We think we are discrete and we have certainly lost our sense of awe at the mystery of life, and our sense of belonging to something larger than ourselves. One must realize that we and our organizations are living organisms. The issues and challenges we face in modern day living, especially in the economy front, is too trivial compared to those faced by the various other species of plants and animals that certainly live much longer than us in their natural habitats. No life other than man thinks of living in isolation. It is inconceivable to think of plant or an animal living all alone, away from other life, though there is a danger of preying and predation. While this being the rule of life for all including human, anthropocentric ideas of life alienate men from nature making him subscribe to the self which is only part of the system, a part not the whole. Ancient civilizations in India have long stressed the need to lean on and learn from natural elements, the *Panchaboothas* namely land, water, air, sky and fire. Each one by itself can be only a part, not the whole.

Look Through Glasses

With sum of parts turning into a collage not a whole, a cross mix of all these basic elements shall be termed a system, a composite entity of nature. Diversity remaining the hallmark, pluralism, secularism, tolerance, love, care and brotherhood and subscriptions to nation building values alone can make a harmonious society. Society is not merely a random collection of individuals. It is organic and therefore the ways by which individuals come together and gel as community and nation must be respected and upheld. Organization theory interpreted in biological sense therefore should be interpreted in terms of both distinctions and unification. The relationships between atoms, molecules, cells, and complex organizations namely organisms as individuals, species, populations, communities, ecological systems and nature have to be dealt with gleaning information from nature with the intent of appreciating coexistence and creating a niche.

Though the recent surge of developments in computing and business relations have blurred lines of demarcation of conventional geographical and national identities, it is important that states and governments make revisits of their own past and try to decipher the tender links that were holding them together as sovereign entities and dependable and responsible neighbours to each other. India a fascinating country, the biggest democracy, a land of diverse cultures and traditions, and the fast growing economy cannot afford to be laid back and stagnant basking only on its past glory.

While it is gearing up to adopt and adapt fast track changes in the international business situations, it should plan to conquer market by making a learning from its past. Its developmental plans and programs must remain pro-poor, but ecologically responsible and economically profitable.

Can we be Holistic in Outlook

The 1.3 billion strong, geo-climatically variable, socio-politically and culturally diverse huge nation presents immense opportunities with its own quota of challenges and problems. The country has been a land of paradox when it comes to the question of planning for development. In the first decades of the present millennium it was considered among the top 12 wealthiest nations but ironically it stood 134th among the 182 countries rated by World Bank in the human development front (Anonymous, 2010). On one hand it could be the nationality of 52 billionaires who control about 25% of the nation's GDP, while 70% of Indians thrive each day with a plight of not being able to spend above the sub global average of INR 80 (1.25 USD) per day, which is recognized as the international poverty indicator according to the Global Hunger Index (Shivaraju and Udayakumari, 2014). With the world's second largest population the country faces the issues of inadequacies in the supply of food and meeting other basic needs.

A home for greatest representation of youth than any country, India takes the dubious honor of housing the world's largest consumers of all goods. Depressingly, falling standards of soil health and failing monsoons make India a vulnerable nation in the agricultural sector (Pittchard *et al.,* 2014). Facing the risk of turning into a food importer too, the country is confronted in dealing with the malice of corruption, favoritism, nepotism and lawlessness. Though presently under control, the linguistic, caste and communal flair appear to be in brewing. To deal with these issues and to wipe out its poverty, and to convert its youth force as change agents, India needs sound educational system. Indian educational system being the largest in the world and the most economical in terms of break even from the learner's point of view, faces the formidable task of making the nation gain the demographic dividend.

To sustain the country in its path of development, preserve its cherished and noble identity, and turn the nation self-reliant one should start churning available resources and ideas. Indian colleges and schools are precisely expected to do this. Pooling in strategies followed from within and outside the countries, most Indian colleges and universities are organizing and offering programs in competitive terms (Stella and Gnanam, 2003). With the policy of disinvestment likely to make in roads, each institution is expected to intensify its efforts to make its academic prepositions

stronger, robust and relevant. The academic excellence that institutions seek to establish should not be gullible and merely fashionable.

The learning process and the academic schedules recommended and prescribed must be organic enough to connect every aspect of life and should be vibrant to relate with contemporary trends in market and society (Agarwal, 1982; Saha, 2016). It should seek to achieve self actualization in the learner and provide him/her with the job and livelihood opportunities. All these call for honest scrutiny. A fair study to propose an academic study program must start with the realization of the haves and have-nots (Sharma, 2014). Besides taking into consideration the resources and the risks, the strengths and the vulnerability of the self, system and society, a mandate for launching an academic program must be developed (Stella and Bhusan, 2011). An unbiased assessment made on all natural lineages is necessary to embark any successful venture. It is here that the Mother Nature shows models from where we can really learn from.

References

1. Agarwal, J.C., 1982 Development and planning modern education: with Special reference to India Vikas publishing House 424 pages ISBN 0706915690, 9780706915693.

2. Anonymous, 2010 Rethinking Poverty. Report on the World Social Situation 2010. ST/ESA/324 . Department of Economic and Social Affairs. United Nations, New York, UN Publications Sales No E09.1.V.10 ISBN 978-92-1-130278-3.

3. Mohan Thite, 2004 Managing People in the New Economy *Targeted HR Practices that Persuade to Unlock their Knowledge Power.* Response BOOKs A division of Sage publications New Delhi-Thousand Oaks – London 293 pages ISBN: 0-7619-9836-5 (US-PB).

4. Pittchard, B., Anu, R., Madhushree, S., 2014. Food Security as lagging component of Indian Human Development. A Function of Interacting Entitlement Failure In: India in the Age of Crisis. The Local Politics and the Global Ecological and Economic Fragility. Michael Gillan and Rob Lambert, Rutledge Taylor & Francis Group. London, New York.

5. Saha, G. 2016 Total Quality Management in (TQM) in educational institutions, International Educational Research Journal 2(6); 63-64, E-ISSN No 2454-9916.

6. Senge, P., Kleiner, A., Ross, R.B. and Smith, B.J. 1994 The fifth Discipline field book: strategies and tools for building a learning organization. Nicholas Brearley: London.

7. Senge, P.M. 1990 The fifth Discipline: the Art and practice of the learning organization. Random House: New York, NY.

8. Sivaraju, K. and Udaykumari, 2014 A critical evaluation on poverty and poverty alleviation programs in India In: Equality and Sustainable Human Development: Issues and Policy Implementation, K. Shivachithapa and J.L..D'Silva Ed. 2Lulu enterprises, UK ltd. Pp 381-390.

9. Sharma, B., 2014 Sustainable Development through Research and Higher Education in India, *American Journal of Educational Research*, 2014 2 (3), pp 117-122.

10. Stella, A. and Bhushan, S., 2011 Lessons of Experience. *In*: Quality Assurance of Transnational Higher Education. The experiences of Australia and India. Stella Antony and Bhushan Sundhanshu Ed. Australian Universities Quality Agency and the University of Educational Planning Administration 2011.

11. Stella , A. and Gnanam, 2003 A., Foundations of external quality assurance in Indian higher education Concept Publishing company, New Delhi 110059 India : ISBN 81-8069-048-2: 233 pages.

TEACHING AND LEARNING METHODS – AN EVALUATION BY STUDENTS

Mrs. K. Anuratha
Asst. Professor, Department of Computer Applications,
MannarThirumalaiNaicker College, Pasumalai, Madurai

Abstract

The objective of this study was to explore the interest of learning methods from students' perspective. A sample of 53 undergraduate students from the Department of Computer Applications and 12 postgraduate students from the Department of Computer Sciencewas used for the study.A set of questionnaires were put and directed to choose the appropriate option as per their wish. The responses were collected and analysed. The results demonstrate that student-centered method was the most effective teaching method than teacher-centeredmethod for the Digital-era. This paper also outlines the methods of teaching and learning.

Keyword: *Education, Teaching methods, Learning methods.*

Introduction
Education

Education is a light that shows the mankind the right direction to surge. The purpose of education is not just making a student literate but adds rational thinking, knowledgeability and independence. Education not only imparts knowledge, skills and instructs values, but also responsible for building human capital which breeds, drives and sets technological innovation and economic growth. In the modest world, information and knowledge stand out as a very important and critical input for growth and survival.

> ***"Education is the manifestation of perfaction already in man"***
>
> **– Swami Vivekananda**

Importance of Education

The education sustains the human values and forms the basis for lifelong learning. It provides the ability to people to become more independent and aware of opportunities and rights. It enhances the power of people to manage health issues, improve nutrition and childcare, and plan for the future. The education not only impacts on human development and economic growth, however is the fundamental requirement of democracy. It is essential for eradicating poverty and it allows people to be more productive in economic life. The education is the key which lets the people to move up in the world, seek better jobs, and ultimately succeed in their lives. So, education is very important, and no one should be deprived of it. A person who receives a **good education** will become a good citizen, more dependable worker.

Without education, a person is incomplete, so education makes a man a right thinker and a correct decision – maker.

In the modest world education is the basic need for man after food, clothing, and shelter. Education promotes good habits, values and awareness towards anything like terrorism, corruption and much more. Education is the strength to a person. Now-a-days, technology plays an important role in continuing the education through known and unknown persons.

Teaching Methods

The word teaching can be defined as the act of giving lessons on a subject to a class or pupils. The primary purpose of teaching at any level of education is to bring a fundamental change in the learner (Tebabal&Kahssay, 2011). The most common approach of teaching includes teacher-centered and learner or student-centered.

Teacher-centered (Direct instruction) - The focus is mainly on passing tests and assessments.

Student-centered (inquiry-based learning, co-operative learning)– Encouragesand motivates students to reflect on what they are learning and how they are learning it.
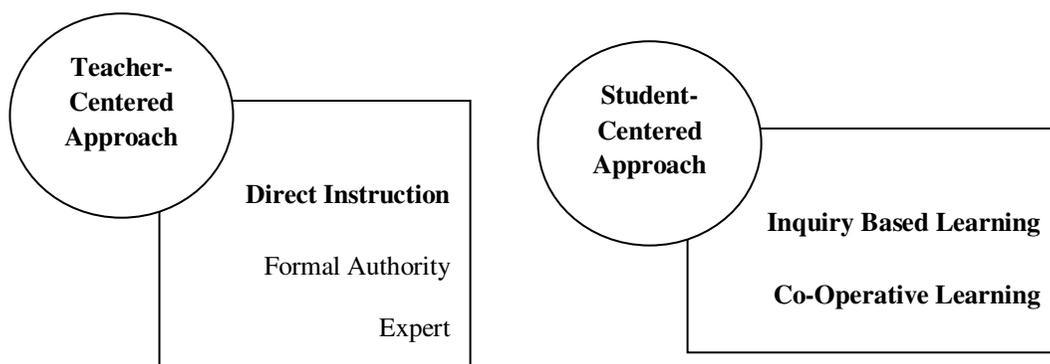
Figure 1 Teaching Methods

Table 1 Comparison between Teacher-Centered and Student-centered Method

Teacher Centered	Learner Centered
Teacher Dominated	Interactive
Integrated	Collaborative
Directed	Guided
Being clear about how to do well in your class	Being clear about how you will promote, measure, and understanding
Admonishing students to "think"	Modelling for students how to "think"

Helping students master content	Helping students understand what's worth understanding
Helping students continuously practice and revise how they perform on one assessment form	Diversifying what you accept as evidence of understanding
Creating curriculum and instruction around standards	Creating curriculum and instruction around a need to know
Handing students a scoring guide	Collaborating with students to create the scoring guide
Letting students choose the project's product	Letting students choose the project's purpose
Starting class with a standard and target	Starting class with a story

Some limitations in traditional teaching method are:

Teaching in classroom using chalk and talk is "one way flow" of information. Teachers often continuously talk for an hour without knowing student's response and feedback.

The material presented is only based on lecturer notes and textbooks.

Teaching and learning are concentrated on "plug and play" method rather than practical aspects.

The handwriting of the lecturer decides the fate of the subject.

There is insufficient interaction with students in classroom☐ More emphasis has been given on theory without any practical and real life time situations.

Learning from memorization but not understanding.

Learning Methods

Learning styles are various approaches or ways of learning. They can be described as a set of factors, behaviours and attitudes that facilitate learning for an individual. Each learner has distinct and consistent ways of perception and retention. Some people tend to pick up information better when it is presented verbally, others when it is presented visually through pictures. Learning is undertaken by the student who wishes to broaden his understanding of various concepts pertaining to different fields. The different styles of learning are:
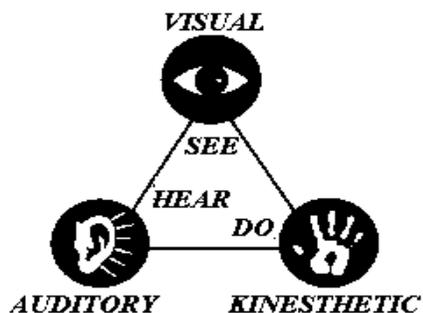
Figure 2 Learning Methods

Visual (spatial): Using pictures, images, and spatial understanding.

Aural (auditory-musical): Using sound and music.

Verbal (linguistic): Using speech and writing.

Physical (kinesthetic): Using body, hands and sense of touch.

Logical (mathematical): Using logic reasoning system.

Social (interpersonal): Learn in groups.

Solitary (intrapersonal): Using self-study.

Butler (1995) found that the quality of a student's outcome in an instructional activity depended as much on learning style, as on the level of the activity. Butler found that matching learning styles with different levels of thinking allowed students to learn most efficiently, effectively, easily and with the greatest enjoyment.

The primary aim of this study was to consider the attention of the students between the different internal assessment methods on students' academic performance.

Methodology and Procedure
Introduction

This section describes the research design used in the study, population and sample, data collection

Research Design

The research design for this investigation was a descriptive study. The independent variables were teacher-centered(blackboard) method, student-centered (smart class) method.

Population and Sample

The population for this study was undergraduate students from Computer Applications and postgraduate students from Computer Science of our college. The sample consisted of sixty-five (n=65) students.

Data

The data for the study were generated from students' academic interest in preparing test, seminar, project, assignment, quiz, group discussion and learn using internet.

Results and Interpretation
Descriptive Statistics

The present study shows the preference level of teacher-centered and student-centered method.Figure 3 shows the preference level of teacher-centered (Blackboard) and student-centered method (Smart class, Self-study). Figure 4 indicates the learning style of the students in the various academic activities like preparing assignment (written), seminar, assignment (Search and prepare from net), power point presentation, submitting project and participating quiz, test, group discussion.
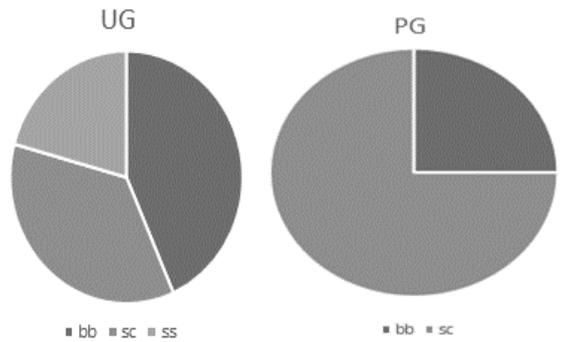
BB- Blackboard, SC-Smart Class, SS – Self Study

Figure 3 Teaching Methods
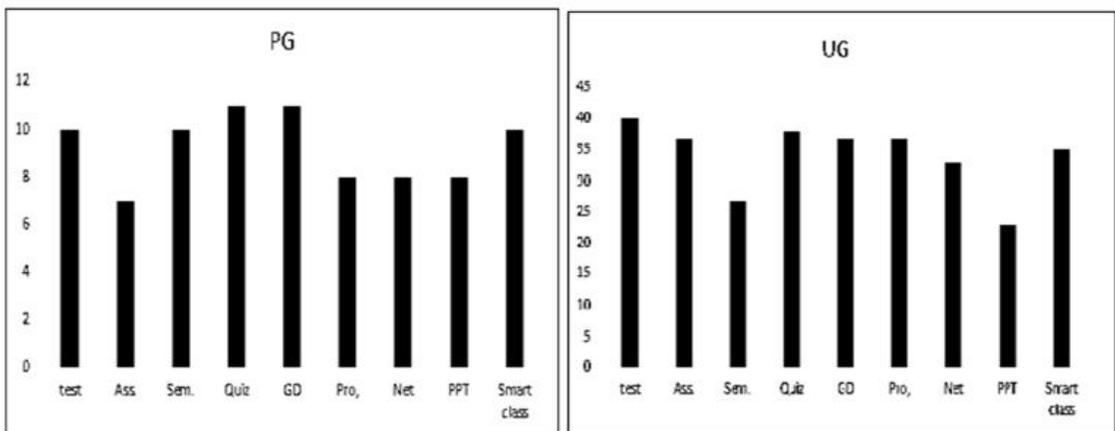
Figure 4 Learning Style of the students

The evaluation finds out that the students' centered method is an effective method. This analysis reveals the interest on learning among the students. The students' participation, enthusiasm and observing skills may develop when we use the second method that student-centered method. The students are active participators in student-centered method, but in teacher-centered method they are just passive listeners. Listening and understanding is different from analysing.

Summary

Even if the most common teaching strategy in higher education is still thelecture method, benefits in the new teaching methods (Smart class) are evident. These

approaches have improved students' retention and have important cognitive, affective, and social effects on students. The motivation for learning increases, and there is a sense ofconnection among students even when they are quite different from one another. A typical learning environment with a presentation from the teacher accompanied by a lecture neither promotes learners' participation nor build the required level of reasoning among students. Students build a better understanding of the main concepts more effectively when they are engaged to solve problems during class activities like quiz, group discussion. This study proves the Student-centered learning environment seems to produce higherlevel learning outcomes more efficiently than a traditional teacher-centered environment. Therefore, teachers should create an atmosphere conducive to learning in order to enhance the development of students' learning experiences. Moreover, teachers should also increase their knowledge of various instructional strategies in order to keep students engaged and motivatedthroughout the learning process.

Acknowledgement

References

1. Elvis Munyaradzi Ganyaupfu, Teaching Methods and Students' Academic Performance, *International Journal of Humanities and Social Science Invention ISSN (Online) 2319 – 7722, ISSN (Print): 2319 – 7714 www.ijhssi.org Volume 2 Issue 9// September. 2013// PP.29-35*
2. Shreemanta Kumar Dash, **ShubhransuPatro, ***Basanta Kumar Behera, Teaching Methods and Its Efficacy- An Evaluation by the Students, J Indian Acad Forensic Med. October-December 2013, Vol. 35, No. 4 ISSN 0971-0973.
3. Dr.Damodharan V. S. ACCA, AICWA and Mr. Rengarajan.V AICWA, Innovative Methods of Teaching

DAILY POOJAS IN MEENAKSHI SUNARESWARAR TEMPLE, MADURAI

D.Uma
Assistant Professor of History
Mannar Thirumalai Naicker College, Madurai

Madurai is also known as "Jeevan Muktipuram". The God at Madurai gives Mukti (Salvation) to the devotees when they perform pooja in their mind. Pooja is the Sanskrit term for worship (poosai in Tamil). It has been used to designate those rituals which constitute worship. Worship is an act of praise and adoration of God and an act of devotion to the Supreme Being. Worship has different meanings: Proceeding on the way, following Reverence, Adoration and Ritual worship. Worshipping God by following some rituals are called poojas. Poojas act as a bridge between God and Man. A divine force which can be only felt and man wants to get that feeling through worship. He believes that God alone will solve his problems and submit himself to help him. He worships God to fulfill his wishes and to do things beyond his limit. When it is solved he worships God as thanks giving. He wants to share his happiness and sorrows with God, whom he trusts, by worshipping Him.

Daily Worship

Daily worship is to be conducted according to Parartha Nittya Pooja rules expounded in the Saivite Kamika and Karana Agamas. These rules suggest three governing principles for daily worship. Pooja must be regular and daily; Pooja must be fixed and pre arranged; and Pooja must be on behalf of and for the benefit of the cosmos from its inception to its end.

In the Meenakshi Sundareswar temple, the daily worship (Nityam) is conducted according to Kamika- Karana Agama rules and is practically the same as they are in many Shiva Temples. There are Sivachariyars who learned Vedas to perform pooja. Seven main shrines where daily Poojas were offered are mentioned in the Srithalam and in the early records of British administration. These shrines refer to Sundareswarar and Meenakshi Shrine, Siddhi Vinayakar, Dakshinamurthi, Sataiyappar, Bhairavar and Surya- Chandrar. A number of minor shrines which are mentioned are the Hanumar temple near the main guard, Viyasaraya Hanuman, Narasimha Swami, Sellathamman, Kasi Visvanathar, Sanjivarayar, Pandyara

Vinayakar, Arasadi Vinayahar Elukadal Vinayakar, Hanumar temple at the North Gate, Virabhadraswami and Pathinettampadi Karuppan.

The Abhisheka materials includes honey, tender coconuts, two sorts of sandal, plantain fruits, patcha karpuram, civet, sugar, curds, parimala dravyam (scents) and vibhuti. During the day the Nityotsavar (Pallakku Chokkar), was taken in procession three times a day round the prakarams of the temple with music and all honours. These poojas and customs are still observed every day.

Rani Mangammal built a mandapam infront of the Meenakshi Temple's eastern side of entrance in the Chittirai Street. It is called as Nagara Mandapam. In this mandapam a murasu (drum) is kept which makes a loud musical sound. It indicates the time of the poojas in the Meenakshi temple to the devotees. In order to beat this drum, the Telugu melakkarar family was invited from Kumbakonam by Acharya, the minster of Rani mangammal. Both of their statues are found in the pillars of the Nagara mandapam. They are employed hereditarily here drearily and still that family members are serving at the temple and the murasu is beaten at about 5.00 am and 5.00 pm every day.

The Meenakshi Amman temple receives six time Poojas every day, namely Thiruvananthal, Vila Pooja and Kalasanthi, Thirikalasanthi and Utchikalam, Sayarachai, Aarthajama Pooja and Palliyarai Pooja. It is unique that during each Pooja Amman reveals in various forms.

Thiruvananthal

Thiruvananthal is the morning Pooja. The temple is opened at 5.00 am and Thiruvananthal Pooja starts at 5.30 am with the worship of Siddhi Vinayakar. Lord Sundareswara and Amman are woken up from the Palliarai and it is called Thirupalli Ezhuchi. Lord Sundareswarar's feet (which were kept in the previous night) are brought in a palanquine to the sanctum of the Swami Shrine from palliarai ceremonially. Then the Pooja starts for Gooddess Meenakshi. The carbuncle (a presious stone) nose studd of the Amman which was removed and placed on the forehead in the previous day night is transfered to the nose again in the morning. It emphasises that the power of the Mulavar Amman is transferred to the Urchava image in the night and is brought back in the morning. This is called as "Mookkutti Deeparatanai". This is a unique event only in the Madurai temple. When the palanquine reaches the Swami Shrine at about 5.45 am, the sanctum Santorum is opened and Pooja is performed for Sundareswarar. During the Thiruvananthal Pooja Goddess Meenakshi is in the form of "Maha Sodasi". There is no bathing ceremony during this Pooja. At the end of this Pooja Gnanapal (sacred milk) is distributed to the devotees as prasadham at Nalvar Shrine.

Vila Pooja and Kalasanthi

This Pooja is held between 6.30 and 7.10 am for Amman and 6.40 am and 7.20 am for Swami. Abhishekam (Holy bath) is held for Vinayaga, Subramaniar, Meenakshi Amman and Swami. Holy water is brough from the river vaigai for the Abhishekam. It is prerformed with the rituals like Snapanam, Punyakavasanam and Agni kariyam. Nithyakni and Nitya Pali are given during this Pooja. Sri Pali Nayaki is taken in a palanquine around the second prahara of Amman Shrine and reaches the Pali Peedam (Altar platform) in the Flag staff. Nitya pali (boiled rice ball) is offered and shown Deeparatanai (Harathi). Then it is taken to the sactum santorum of the Amman Shrine and Pooja is performed. The same procedure is followed in the Sundareswarar Shrine. Then Gaja (Elephant) Pooja and Ko (cow) Pooja is held. Sri Meenakshi worship Lord Shiva in the form of a cow, is called as Ko Pooja. According to puranas Cow is the living place for all living being and Devas. It emphasizes that when Sri Meenakshi worship Lord Shiva, it is like worshipping by all living being and the Devas. It also denotes that like the mother takes medicine for the disease of her child Goddess Meenakshi worship Lord Shiva for the sake of her children in the world. Worshipping a cow is equal to worshipping all the Gods. At this time a Sivacharyar brings a cow to the altar of the Amman Shrine, wears garland, do special Pooja and feed the cow. This Pooja is performed between 6.30 am and 7.10 am behind a curtain cloth. It is a convention that Goddess Meenakshi takes the form of Palai and Bhuvanai during this time. Pooja is performed between 6.40 am and 7.30 am for Lord Sundareswarar.

Thirukalasanthi and Utchikkalam

This Pooja is performed at the day time from 10.30 am to 11.10 am at Amman Shrine and 10.40 am to 11.20 am at Swami Shrine. Two Pooja pots are filled with water at Yagasala and Vedas are recited by the priest to bring holiness. Then Abhishekam is held for both Amman and Swami by that holy water. Soda Soupasara Deeparathanai is shown during this Pooja. After performing Pooja to the Amman, a priest surrounded by persons playing Nathaswaram and Tavandai (a drum like musical instrument), Theevatti (a torch with fire), water in a small kalasa and boiled rice as nivetyam, go round the praharas and performs Pooja for all the parivara deities, and again reach the Amman Shrine. Nathaswaram (air), Tavandai (sound-sky), Theevatti (fire), Boiled rice (which come from land) and water denotes the Pancha bhuthas or five elements namely wind, sky, fire, land and water. It emphasizes that Amman Herself worships all the parivara deities. This is called as 'Alavattam'.

In the early days the priest went with a picture of a cow during this pooja assuming that Amman Herself, in the form a cow does the pooja. This was called Ko pooja. Naivedyam is offered to the deities and prasadam is distributed to all the devotees.

A scheme has been started for this prasadham distribution by the temple authorities. The donors who are willing can invest Rs.5000/ in the bank. Every year, on the day which he mentions prasadham will be distributed in his name from the amount of interest. During this pooja Amman is in the form of Shyamala and Matangi.

Sayaratchai Pooja

This pooja is held between 4.30 pm and 5.00 pm in Amman Shrine and between 4.40 pm and 5.20 pm in Swami Shrine. It is also called as Evening pooja and pradosa period pooja. It is performed with Avahanam and Abishekam. The same procedure of Utchikala pooja is followed during this time also. Amman gives dharshan in the form of Suha Shyamala at this pooja.

Artha Jama Pooja

sThe Artha Jama Pooja is held from 7.30 to 8.10 pm for Goddess Meenakshi and from 7.40 to 8.20 pm for Lord Sundareswarar. This Pooja is famous in the Madurai temple. During this Pooja Amman is weared white silk sary and white flowers. She is in the aspect of Panchata Satchari with gracious look. At this Pooja also Abhishekam is done to the deities.

Palliarai Pooja

Palliarai (bed chamber) Pooja is performed prior to the closing of the temple at night. When the Pooja bell ring at about 9.00 pm at the Anukkai Vinayaka Shrine at the second prahara of Chokkanatha Shrine, the feet of Sundareswarar are carried in a silver palanquine to the shrine of Meenakshi. After the removal of the Lord's feet the Sactum doors of Swami Shrine are closed. The procession goes around the second prahara and reaches the Kambattadi Mandapam. There the temple accountant reads the account of the day. Here vedic hymns, Tevaram and Tiruvasakam songs are recited. After performing Upakara Pooja at this place, the palanquine accompanied by music of Nathaswaram and chanting Thirumurai by Othuvars moves over a cloth spread on the floor to the entrance of Meenakshi Shrine. On the way Deeparathanai is shown at some places. Then Deeparathanai is shown to Goddess Meenaskshi. Her carbuncle nose stud is removed and placed on Her forehead. This is called 'Mookkutti Kalattal'. There is a convention that the power of Mulavar Amman is transferred to the Palliarai Amman by doing so. During this time a Pooja is held to the feet of Lord Sundareswarar in the Palanquine by a priest and then the priest carries the Lord's feet to the Palliarai. The doors of Amman shrine are closed. After Upakara Pooja with Sodasobasara Deeparathanai and music, the doors of the Palliarai are closed. Prasadhams of Sundal (boiled cereals), milk and Vibhuthi (sacred ash) are

distributed to the devotees. (Vibhuti is distributed instead of Kumkum in the Amman Shrine during this Palliarai Pooja only).

The Palliarai Pooja though common in all Shiva temples it is at Madurai it seems to have originated, known from the fact that in all Shiva Shrine the palliarai deity is called Amsabhudi Chokkar, irrespective of the name of the Lord of the Shrine. Chokkar being the name of the deity of Madurai, it means that the palliarai Pooja in all temples repeated the myth of the Madurai temple. Again the Lord's feet are removed from Palliarai and returned to the Swami Shrine ceremonially in the next morning. Thus the temple doors are opened at 5.00 am and starts with Thiruvanantal Pooja at 5.30 am at Amman Shrine. When the Palliarai palanquine reaches the Swami Shrine the day Pooja begins. From 12.30 to 4.00 pm. the temple doors are closed and again opened at 4.00pm and Poojas are performed. At 10.30pm the temple doors are closed at night. The time schedule of the daily Pooja may be changed during the festival time. If the procession goes to other mandapas outside the temple it starts only after the evening Pooja. Arthajama and Palliarai Poojas will be held after the deities return to the temple. The following table shows the daily Pooja timings of Goddess Meenakshi and Lord Sundareswarar.

Sl.No.	Name of the Pooja	Arulmigu Meenakshi Amman Shrine	Arulmigu Sundareswarar Shrine
1	Thiruvananthal	5.30Am	5.45 Am Swamy Shrine is opened and Pooja is performed
2	Vila Pooja and Kalasanthi	6.30 Am to 7.10 Am	6.40 Am to 7.20 Am
3	Thirikalasanthi and Utchikalam	10.30 Am to 11.10 Am	10.40 Am to 11.20 Am
4	Sayarachai	4.30 Pm to 5.10 Pm	4.40 Pm to 5.20 Pm
5	Arthajamam	7.30 Pm to 8.10 Pm	7.40 Pm to 8.20 Pm
6	Palliarai and Pallakku Ceremony	Palliarai Pooja is performed at about 9.30 Pm and the temple is closed at 10.00 Pm	At 9.15 Pm Lord Shiva starts in the Pallakku (His feet) towards Meenakshi Shrine and Swamy Shrine is closed at 9.20 Pm

The expenses for these were borne by the temple itself from the income of lands owned by it or from the many endowments and grants made to it by the rulers or the public. On Fridays the Arthajama Pooja and Palliarai Pooja is held one hour latter from the prescribed time.

Conclusion

Apart from the daily Poojas, special Poojas are performed for Goddess Durga on every Tuesday and Friday. The Unjal Mandapam contains a swing on which the golden

image of Lord Shiva and Goddess Meenakshi are placed on every Friday for the weekly darshan (glimpse). A special Pooja known as 'Paksha Valipadu' (Pradhosha Pooja) is performed once in fifteen days. The monthly Poojas refers to certain Poojas which occur once in a month. In the Meenakshi Sundareswarar temple the Maha Sankranthi pooja is perfomed on the first day of every month.The Pournami Pooja is performed on the full moon day of every month. Each day is a festival day in the temple. Thus there is no doubt that Madurai is called as the city of festivals.

PERIYAR'SFEMINIST MOVEMENT IN TAMILNADU

Dr. M. Lakshmanamoorthy
Assistant Professor, Department of History,
Saraswathi Narayanan College, Perungudi, Madurai

The spread of western education made its impact on the educated Indians to rethink a certain ideas in the social problems. Difference exists between the feminist movement in India and abroad. In all over the world men did not encourage the women's movement and were not ready to give women on equal status in society. Several enlightened reformers played a vital role to fight against social evils among women. They firmly believed that with the betterment of women's lot. In this regards the lot of efforts done by missionaries. For example London Missionary Society and Church Missionary Society were praise worthy work for women and children's. For their sake of her life Christian missionaries opened a number of girl's schools in Madras and Bombay presidencies. Journals and other literary works raised their voices against the social evils and emancipated women's rights. Both women and men contributed valuable writings and they are the real documents of their contemporary society. This paper entitled "Feminist Movement and Periyar"gives detail study of women's emancipation.

E.V.RamasamyNaicker who is fondly remembered by the women of Tamilnadu is the real father of women's liberation. He was the first man with adamant boldness and rational thinking who questioned all the foolish customs. Pseudo values of Hinduism, Brahmanism, and code of chastity, male chauvinism and gender discrimination.He was a real warrior and man of action through is Self-Respect Movement. The Dravidian movement contributed much for the development of the concept of women's liberation.

The SuyamariathaiIyakkam got its basic concepts solidified in the 10th non-Brahmin provincial conference held at Madurai on 25 and 26 December 1926. As early as 1929 itself, PeriyarE.V.Ramasamy got the following resolutions passed in the Suyamarinyathai conference at Chingleput. The girls below sixteen should not be given in marriage. The girls should have the right to abrogate the marriage agreement. The widow remarriages must be encouraged. Both men and women should be allowed to choose their life partners irrespective of their caste and religion and the marriage ceremonies, should be reformed to suit these aims. It was also resolved in the same conference that women should also be given equal right rights to property and be

allowed to undertake any profession like men. This may be considered the genesis of the socialist feminism of Periyar.

Periyar considered women's liberation as part of the programmer of his Self-Respect Movement. This was because, his aim was to abolish with the practice of both based discriminations. He attempted to destroy the Varna caste system. He prescribed and maintained rights duties and status on the basis of one's birth. He had to battle with women's slavery, for he thought that a woman was accorded a degraded status on the basis of birth. By 1944, justice party was rechristened as DravidarKazhagam. The self-respect movement and DravidarKazhagam, since in 1944 became one and the same. Socialist feminism in Tamil Nadu found its beginning with PeriyarE.V.Ramasamy. When other national leaders, intellectuals and social reformers wanted liberal reforms, Periyar advocated gender equality and women empowerment. His conceptions on women's liberation appeared in the form of a book, Penn EanAdimaiyanal? (Why did woman became slave) in 1942. In this book he speaks about the evil designs of men when they thrust the concept of charity on women, the role of marriage in enslaving women, the importance of widow's remarriage, the institution of prostitution which was built on the concept of women slavery; the women's right to refuse to bear children and the need for the grant of right to property. Periyar analyses the causes of women's slavery defends as various fields such as karpu, prostitution, concubine, sastras and soon.

His analysis of the concept of 'karpu' is important for he consider it as an evil design of man to enslave woman. He observes, 'chastity not related to one's marriage has been imposed on only women. It can be supported in view of women's health, body care and general conduct. But chastity is not understood in that sense. We may understand this from the fact that chastity is not being insisted upon for man. Further example that can be cited is that chastity is not found even among male gods. It means, justice differs on the basis of one's birth and the concept of chastity is based on such discrimination. This should be completely abolished. The idea that chastity is a must for women and it need to be emphasized for men, is that she is considered as the property of a man. All feminists, though they speak of women's liberation, are not the same in their thrust and convictions. Some reformists argue that the inherent traits of man are different from those of women and women are known for their kindness, motherhood and preservation. But, these arguments are unacceptable to Periyar.

He has only one yardstick for both men and women. He says that if women want to get really liberated they should discard this concept of Nirbandhakarpu, which is based on birth and they should undertake SuyetchaiKarpu (self-chosen chastity) which prescribes chastity for both sexes. And then next he condemned the very word

'prostitution' because it degrades only women and no man is rebuked by calling win 'vibacharam' (one who takes part-I prostitution) in the same way as a woman is ridiculed by calling her vibachari. He also finds fault with the practice of punishing only women for prostitution. As viewed by Periyar, the vibacharam is a symbolic word denoting the slavery of woman.

The word 'karpu' is a fraud and the word vibacharam is a nuse. These words are used to keep women under the control of men. These two words are contradictory to the nature itself. They have been thrust upon only women. These words were invented by men in self design.

He condemned other social institutions that keep women in contrast fetters. He also condemned the practice of concubine. He wanted to the extent of saying "like men, women should also be ready to do the same. When men keep two concubines, women should attempt to keep three. Only then, the condition would become alright and a real compromise would appear. Some would say that this is a wrong and the social conduct would be married, and so the men may be advised to its maximum to mend their ways. Men have been advised for ages.

Similarly he condemned those who agitated in the names of sastras, against the Sharda Act of which tried to fix marriageable age for men and women. He stated that the 'Sastra Keepers' say that there is no place for marriage of woven after their puberty and they would also stage 'satyagraha' for it. If a thing appears to be just, it should be performed. To consider whether it is against the sastras or in accordance with them is foolishness and slavishness. He asked when were the divine consorts, Sita, Rukmani, Sathyabhama, Parvathi, Valli, Deivayani, Meenakshi, AndalNatchiyar and Dhaupathi married whether before their puberty or after that. Periyar feels that widows are forced to throw their own babies born in liaison into the ponds of temples and into bushes, because legitimate marriages are denied to them.

Periyar held the view that "women should win their freedom by their own effort. He argued when men attempt to fight for the liberation of women, it strengthens women's slavery and strengthens the fetters in a way that women would never win their freedom. The attempts of men showing that they are revering women and striving for the liberation of women are only attempts to deceive women". Wild cats give liberation to rates anywhere will forces give liberation to goats and chicken? He compared the men-women relationship with the relationship between owner and worker.

The hurdles in the way to women's liberation are the women themselves. Firstly they should get the idea that they deserve complete freedom. Nature has made them or god has created them as slaves to men. He views that women should come forward even to refuse to bear children. The burden of bearing child makes it difficult

from women to prove that they can live without men. Only because men are free from the burden of child bearing, men have the chance of telling that they can live without women. So women should be ready even to refuse conception. Commenting as the concepts of manhood (aanmai) and womanhood (Penmai) he says. The very word 'aannmai' is used in a way to degrade womanhood. As long as manhood is upheld, women have to remain slaves. 'Freedom' and 'Bravery' have been made attributes of man. The slavery of women is the creation of men. Besides, 'manhood' and 'womanhood' are believed by man to have been-created by god". Because the faith in the creation of god upholds the disparity between man and woman. He viewed that marriage should be declared a criminal offence.

In addition to that, Periyar advocated education as a means to women's liberation. He questioned why women should learn playing veena and music? After marriage husband did not allow it to exhibit. This kind of learning is only an advertisement to attract bridegrooms. He says that these is nothing wrong with a girl in looking pleasant, but they should not become 'jewel stand' and beautify themselves to be feasts to the eyes of men. All men and women should be treated in the same way and give similar names. Thus self-respect marriage introduced by Periyar. This type of marriage was a great lap forward in the direction of women's liberation.

Periyar evaluates feminism as follows "the feminism of Periyar is distinguished from the women's rights advocated by other reformers. Because what others aimed at was securing an honorable place for women in the male dominated world, but Periyar's feminism, true to its sense, aimed at redeeming the world, which women had lost in the course of history". Thus Periyar wanted to liberate women from the dehumanized state. He found the women's degraded position as being protected by the social order in the name of religion and tradition. That is the only way for his advocacy of total overhauling of the social order instead of liberal reforms.

Nots and Reference

1. Veeramani, K., PeriyarKalangiumPenmurimmai I, II, Part-5,6, Periyar Suyamariyathai PrasaraVeliyedu, 1994,p.17.
2. Thandavan, R., The Dravidian Movement, Chennai, 2001, p.13.
3. Anaimuthu, Periyariyal-I, University of Madras, Chennai, 2001, pp.141-142.
4. Ibid., p.144.
5. PeriyarE.V.Ramasamy, Penn EanAdimaiyanal? 1st Edition,(Tamil) Chennai, 1997, p.12.
6. Ibid., pp.11-16.
7. Ibid.
8. KudiArasu,(Tamil) Erode, March 1936.

9. Periyar, E.V. Ramasamy, op cit.,pp.15-16.

10. Ibid., pp.56-57.

11. KudiArasu,(Tamil) February 1931.

12. Ibid.

13. KudiArasu,(Tamil) June, 1935.

14. Ibid., 1928.

15. Dviya, PeriyarumPenniyamum, (Tamil), Periyar and Feminism, (English), Sinthanaiyalam, PongalSirappu Malar, Chennai, 1998, pp.91-94.

16. KudiArasu,(Tamil) August, 1928.

17. Ibid.

18. KudiArasu,(Tamil) September, 1946.

19. Ibid,.

20. Dviya, op.cit., p.91

THE YEOMEN SERVICES OF VIJAYANAGARA - NAYAKS IN MADURAI

Dr.B.Athmanathan
Assistant Professor, Department of History,
Mannar Thirumalai Naicker College, Pasumalai, Madurai

Introduction

The Vijayanagara rulers established their power in Madurai after the downfall of the sultanate. The fall of the Sultanate of Madurai is to be traced to the rise of the Hindu Kingdom of Vijayanagar. The credit goes to Kumara Kampana, son of Bukka I, the brother of Vijayanagar ruler Harihara. During the reign of Krishnadevaraya, he created a new province in South Madurai as his headquarters. Visvanatha was appointed as viceroy with the titles 'Chief of the Pandya country and the Lord of the Southern throne'. Then Visvanatha Nayak and his successors ruled Madurai[1]. After the end of battle of *Talikota* or *Raksha Tangadi*, the great Hindu Empire came to be an end. Simultaneously, the viceroy of Vijayanagar Empire, like that nayaks of Madurai, Senji and Thanjavur announced himself as Kings. These were all happened during the second half of the Sixteenth century A. D. This paper seeks to explain some of the Yeomen services of Vijayanagara - Nayaks in Madurai.

Yeomen Services

Visvanatha nayak, the son of Kotiyam Nagama nayak has been credited with the founding of the Nayak dynasty of Madurai[2]. Visvanatha nayak was a good administrator and was ably assisted in his work done by Ariyanatha mudali,he worked under the first four Nayak rulers[3]. He built the *Ayirankal mandapa* and its pillars were the prominent architectural features of the Vijayanagara period. An equestrian statue of Ariyanatha mudali is on one the front pillars. But evidently this *mandapa* built during the reign of Krishnappa Virappa nayak (1572 – 1595), son of Krishnappa nayak I [4]. The first half of the Fourteenth century A. D., Alauddin Khilji, one of the rulers of Khilji dyanasty, built the palace of Thousand pillars, called as *Hazar Situn* in northern India. So Vijayanagara- Nayak rulers of Southern India might have been known about the *Hazar Situn*.

The next prominent ruler of Nayak dynasty is Muthu Virappa nayak (1609-1623), elder brother of Tirumala nayak. He ruled Madurai and built one temple called Sri Maragadavalli Sametha Muktisvara temple near present Vandiyur Mariamman teppakulam. This temple is famous for its architectural techniques. Two times per

year, 10th to 21st of March, 20 minutes per day of morning 6.35 am to 6.45 am and 7.00 am to 7.10 am and 19th to 30th of September, 20 minutes per day of morning 6.15 am to 6.25 am and 6.40 am to 6.50 am, sunlight rays enter into the Sanctum Sanctorum (*Garbagriha*) of Muktisvara and spread over it. Every year this incident takes place only at Madurai in the particular temple of South Tamil Nadu[5].

After the death of Virappa nayak, Tirumala nayak came to throne (1630-1652). He was a devotee of goddesses Minakshi and he assured to built a Teppakulam for Minakshi and Sundareswara. He selected and dug the Teppakulam infront of Sri Maragadavalli Sametha Muktisvara temple. It measures 1000 feet long by 950 feet wide[6]. During the construction work, one great Vinayaka Sculpture found and it was installed in the Southern side of Minakshi – Sundareswara temple complex. It is called *Mukkurini Vinayaka* nowadays[7]. Unfortunately, Maragadavalli – Muktisvara temple was not extended, because of excavated of Teppakulam. Tirumala nayaka felt that incident and instead of he built the raja Gopura in the center of mandapa in Teppakulam[8]. If one could see the Raja Gopura in the inside of the Temple and eastern side of teppakulam, definetly it shows the Raja Gopura of Maragadavalli – Muktisvara temple. Besides, Tirumala Nayak arranged the float festival (*Teppotsvam*) to be celebrated with great pomp of his birthday. He shifted the marriage celebration of Minakshi from *Pankuni* to *Cittirai*. The reason for this change is stated to be that the month of *Pankuni* happened to be a harvest season when farmers are busy. But festivals like *Katiraruttal* (Harvesting) is in *Tai* and *Maci* and not in *Pankuni*.

In the month of Tai Sundareswara and Minakshi are to taken to Anuppanadi for *Katiraruppu* on the *Punarpusam* day. After harvesting people must be free to attend the festival held in *Pankuni* [9].The *Cittirai* festival is precede and succeeded by two important *Vacanta* (Spring) festivals , a *Kotai Vacanta Vizha* (Pre- Summer) in the month of *Pankuni* and *Vacanta Vizha* (Post Summer) in the month of *Vaikasi*.

The moast famous one of Cittirai festival is Alagar Aatril Irangudhal and Alagar halt in Tenur mandapa where he came to bless the Manduka Mahirishi on the Pournami day of Cittirai [10.] Next one is Tirumala nayak built the Palace in 1636. It consists mainly of two parts, namely Swarga Vilasa and Ranga Vilasa. He conducted daily dance and music performances in the palace [11]. He built *pudumandapa* or *vacanta mandapa*. It was started in 1628 A.D. and ended in 1635 A.D. There is 124 sculptured pillars in the *pudumandapa* of Nayaka rulers like that, Visvanatha nayak, Kumara Krishnappa nayak, Visvappa nayak,Krishnappa nayak, Lingamma nayak, Muthu Krishnappa nayak, Kasthuri Rangappa nayak, Muthu Krishnappa Muthu Virappa nayak, Tirumala nayak and his wives also[12].

In 1574 A.D Muslim peoples got a grant for his religious purpose from nayak kings at Goripalayam in Madurai. In 1733 A.D Queen Minakshi granted a land to built

Mosque for Muslim[13]. In 1705 A.D Madurai Queen Rani Mangammal gave a *Gadjan* Charter (*Kadajan Sasanam*) to patnool salis of Madurai. They also permitted to offer Pujas and changed the sacred thread on one particular day. At South Masi Street Krishnankoil priests are well known examples of *Gadjan* Charter[14].For the first time in Madurai during the reign of Virappa nayak (1572- 1595) first Christian Church was established. Fernandas was the first head of the Church. Robert de Nobili also came to Madurai in 1660A.D. and he got recognition from Muthu Krishnappa nayak and Muthu Virappa nayak. John de Britto also came to Madurai in 1680 A.D., and he selected and worked at Ramanathapuram. Unfortunately Sethupathies of Ramnad assassinated britto in 1693 A.D[15].

At Madurai Kudal Alagar perumal temple the Vijayanagara rulers and their officials appear to have made liberal benefactions to the temple as cut by many of the epigraphs found in this temple[16]. A record of Ramaraja Vitthala deva maharajan dated s.1469 (1547) states that Kandadai konamman supplied stones for building the *ardhamandapa* of the temple. Besides the Nayak rulers constructed *ardhamandapa, mahamandapa*, pillared halls and *garbagriha* of Thirumohur Kalamega perumal temple. Tirupparankundram temple and Tiruvadur Vedapuriswarar temple[17].

During the reign of Vijayaranga Chokkanatha nayak, grandson of Rani Mangammal levied the tax to Mudalimar community. This community peoples worked as a Palanquin bearers during the festival times at Madurai Minakshi Sundareswarar temple. In the same time Chokkamudali, one of the workers of the temple immediately climbed up the eastern tower therefrom he jumped down to the floor and he died. After this incident Vijayaranga Chokkanatha nayak felt that incident and cancelled the tax and gave some grants. This information is carved on the wall of eastern tower[18].

Conclusion

The Vijayanagara - Nayak rulers ruled Madurai over 207 years (1529-1736). At that time, they well developed the Madurai city. They served a lot to all community peoples. During their reign, they built and renovated lot of temples in and around Madurai region and they treated equally of all religion in Madurai.

End Notes

1. Baliga,B.S., Gazetteer of India, Madras, 1960, p.46
2. Devakunjari, D., Madurai Through the Ages, Madurai,2004,p.178
3. Idem.p.181
4. Idem.p.240
5. Arulmigu Sri Maragadavalli Sametha Muktisvarar Tirukoil Varalaru, Madurai,1994

6. Ibid.
7. Now it is in the Minakshi – Sundareswarar Temple complex.
8. op.cit. Arulmigu Sri Maragadavalli Sametha Muktisvara Tirukoil Varalaru
9. Jeyachandran,A.V., The Madurai Temple Complex, Madurai,1985,p.219
10. Ibid.
11. Madura Welcome, Tourist Guide book.
12. Details collected from Pudumandapa.
13. Sethuraman,G.,Tamilnattu Samudhaya Panpattu Kalai Varalaru (Tamil), Madurai, 2001, p.305
14. Idem.p.285
15. Idem.p.303-304
16. Devakunjari,D.,op.cit,p.306
17. Idem.pp.312-322
18. Dinakaran,3 August 2007

SEMANTIC DIGITAL LIBRARIES – CHANGING LIBRARY SERVICE DELIVERY MODELS BEYOND WEB 2.0

K. John Paul Anbu
Head – Periodicals, University of Swaziland, Swaziland

Dr. Sanjay Kataria
Librarian, Bennett University, Greater Noida, UP

Abstract

The introduction of Information and Communication Technologies (ICT) in libraries and Information centers have triggered a sea change in its outlook. In today's world the libraries are expected to provide unparalleled services to its clients. Most importantly they are expected to play the role of a knowledge repository. With the myriad access technologies, libraries are poised to provide dynamic content to its patrons. The impact of Web 2.0 on library services, especially the impact of Synchronous messaging, Steaming media, Blogs, News feeds, and Tagging has transformed the libraries from being a passive reading room into a dynamic knowledge resource centers. Content Enrichment Services, the next generation of OPAC standards and the emergence of semantic search capabilities have transformed library catalogues into knowledge exploration portals. This paper looks at the semantic web technologies as an extension to the web 2.0 technologies and how digital library initiatives are making use of the semantic web framework to advance the information superhighway.
Keywords: *Web 2.0; Semantic web, Semantic Digital Libraries, Library 2.0, Ontologies, Web Ontology Language, OWL*

1. Introduction

The history of libraries show that the role played by libraries in the past was that of a much simpler one. It stored the volumes of human knowledge and provided access to them. This unique position of libraries ratified librarians to be the authority of human knowledge. The advent of Information and Communication Technologies (ICT), especially the technology that drives the information society has completely changed this complexion of libraries. The initiation of microprocessors into the labyrinths of libraries, the availability of networked access technologies and enormous storage capacities have created ripples in the information ecosystem. The history of libraries show that the first real revolution in libraries started with the invention of moveable printing press by William Caxton in the late 15th century (William Caxton, http://www.encyclopedia.com/people/literature-and-arts/libraries-books-and-printing-biographies/william-caxton). Human knowledge which was private and belonged to the elite was made accessible to common man with the mass printing revolution. Libraries became the centers of knowledge exploration with the well-stocked collection of human knowledge. The second wave of revolution started with the advent of microprocessors

into the library realms around the mid-1980s. The card catalogues which served as the index of a library started getting its facelift with the bulky catalogues being automated. The cumbersome library operations such as circulation control, serials control became the objective of further automation. The advent of internet technologies further made the catalogues available from outside the walls of the libraries. Online Public Access Catalogues (OPACs) became the basic need of a library.

The proliferation of internet technologies and mass storage devices along with cloud and grid computing paved way for information sources to be available online as electronic information resources. The libraries are now astounded with E-books, E-Journals and Electronic document system which has transformed libraries into a busy hive of information resources. Even the names of libraries have transformed into Learning Resource Centres where the librarians have become the beacons of providing knowledge resources. From the pedestal position of safe guarding the information, the librarians' have become the facilitators of knowledge. This positive ICT environment in libraries have influenced the mindset of the users. The passive library users who were known as 'readers' of the books have slowly evolved to be 'consumers' of knowledge and finally into 'information seekers'. With the evolution of Internet, especially the next generation of web and related tools the users have elevated themselves from 'information seekers' to 'information confirmers' and finally to 'information consolidators'. The change in the perception of readers and the libraries have restructured the entire concept of libraries and redefined its objectives.

The main reason behind this rapid transformation in libraries both with the services and users is owed to the next generation of web technologies and the knowledge management tools and services it offers. The evolution of web technologies, especially after the turn of this century, transformed the monotonous static web into active web. Technologists call this transformation as 2.0 tools and technologies. These web 2.0 tools and technologies provide a significant rise in social networking websites and online applications where, like minded users share resources, create, tag and label content and rate it in some way. This is the base for "information consolidation" as users have easy access to verify, consolidate and confirm every bit of information, which they receive. With the constant re-engineering of web tools, especially the service aspect of web, have paved way for a numerous options in the advancement of web tools. Chief among them is semantic web tools and techniques which has the potential to trigger a massive interactive web services.

2. Web 2.0 and its effect in the transformation of library services

The genesis of Web 2.0 can be attributed to the brainstorming conference which took place after the collapse of the dot.com debacle in 2001. The conference mainly

dealt with the newer applications which were born after the collapse which gave hope for the resurrection of the web. The conference in its retrospection accepted the root cause of the dot.com debacle as the cold attitude of the web. The general consensus of the gathering was that the web was too impersonal for people to venture any meaningful activity and hence vowed to convert the web into an active warm web where the users can be allowed to interact with the services. Many pundits predicted the internet platform to be a failure especially after the dot.com collapse but from the ashes of the dot.com collapse rose a newer kind of web. The thrust towards a newer web was not to provide any standard but to give the users an experience. Hence the newer web was born. The new web, which is passionately referred to as web 2.0, provided the much-needed warmth to the users through the interactive and responsive web experience. The principles of web 2.0 can be summarized as "the transformation of services from a static monologue to a dynamic dialogue where collective intelligence is the key to success" (Jetty, et. al. 2011). The key concept of web 2.0 resides in collective intelligence, which reiterates that it is not possible for everyone to know everything but assumes that everybody knows something and when collectively used it can produce good results.

Important services which emerged from the advent of web 2.0 services were, Instant messaging, Streaming Media, Blogs, News Feeds and Tagging to name a few. These services proved to be a big boon to the libraries which thrive on collective knowledge of individual users to provide comprehensive information resources. The opportunities provided by the web 2.0 technologies were wholeheartedly embraced by libraries to provide an ubiquitous information connectivity to the users. Services such as Instant messaging, Blogs and Tags started adorning library catalogues. These important ingredients proved very useful to library services as they started triggering a massive paradigm shift in library usage and functioning. The passive library professionals and Information services started becoming active Information service deliverers, as the users were able to access the library services instantly and were able to consolidate the information from the library professionals instantly. Services like "Ask the Librarian", "Ask Me" started adorning library portals. Services like Streaming Media provided the much-needed choice based service delivery in library services. The shift of choosing the type and media along with vast available content became the responsibility of the users. This has transformed librarians to think beyond their realm of expertise to provide all the possible information to all the possible users. Blogs and News Feeds brought new kind of information sources into library sectors. Libraries and Librarians started their massive transformation from the traditional libraries and librarianship.

3. Beyond web 2.0: the semantic web

The success of the web 2.0 services, especially the optimum usage of these services in the libraries, have made its users to ask questions on the impending technological advancements. More specifically the question which is asked by many users are what lies beyond the web 2.0. Many technologists feel that the web 2.0 is almost running towards the end of its life. As the current web services are fading into the twilight a number of newer technologies are slowly appearing in the digital landscape. A closer look at the current web technologies prove that the current web do what it is designated to do but Sure et al. (2005) points out that the problem of the current web is in its architecture, especially in the usage of its HTML language. They further argue that "The major shortcoming of HTML is that it is well suited for human consumption, but not for machine-processibility" (Sure, 2005). The main drawback of the current web technologies is the dependence on human intervention.

Keeping this short-coming in mind, the possibility of the next technology points towards a technology where there will be absence or minimum of human interaction and more of a machine to machine interaction. Going by the experiments done on these advancements it is possible to create a web which is more machine dependent using semantic web technologies. Such a technology, if it can be implemented, will work similar to a very intelligent personal assistant who knows everything and provide reasonably correct and intelligent answer to any and every question thrown at it. Library professionals who are hard-core technology dependent feel that this is exactly what they need to push the impetus of the information age, whereas the moderate librarians feel that the human interaction akin to the current technology is sufficient to provide intelligent information resources. Technologists suggest that a complete overhaul of the existing web technology and replacing it with a completely newer technology will be a monumental job. So the middle ground will be the co-existence of both types of webs, the web 2.0 and the next generation of web namely semantic web.

Semantic web technology proposes that the user do minimum work and allow the internet to do all the rest of the work for them. It further says that this can be easily achieved through the use of semantics. Warren and Alsmeyer observe that "the basic building block of Semantic technology is the use of eXtensible Markup Language (XML) which permits the use of tags to describe objects" (Warren and Alsmeyer, 2005). The main drawback of the current technology is that we deal with documents and each document is linked to another document. Semantic technology proposes that instead of linking documents to document if each data in the document is linked to another data using vocabularies using certain rules it is possible to make the machines understand and react differently. Once the data is linked through vocabularies which are called as ontologies "the semantic web converts web pages from being readable and displayable

by computers to being understandable by computers. It does this by adding extra metadata to web pages and by sharing this metadata between multiple applications. It enables computers to understand a web page in the way a human does." (Burke, 2009). By achieving this feet it is possible to make machines to Find, Interpret and Relate data within the context it has been searched and with the relative context for which it has been searched.

The fabric of semantic web is intricately woven with data that is coded and described using ontologies. Ontologies are nothing but the description of concepts and relationships which can exist between two entities. In ontologies a concept can mean a variety of things such as an object or an activity. A relationship in ontologies mean how the two entities are connected. Since ontologies provide a common framework of information structure it is easy if a reasoning algorithm has been used to extract information from the ontology graph. There are a number of existing reasoning engines which aid in the retrieval of ontology graphs. Notable among them are Jena (https://jena.apache.org/) Sesame (https://www.w3.org/2001/sw/wiki/Sesame) and TRIPLE (https://www.w3.org/2004/12/rules-ws/paper/98/). In order for the ontologies to be encoded and to be formally described a common language is needed and the W3C (World Wide Web Consortium) recommends Web Ontology Language (OWL). Synak et. al (2009) observes that OWL has been designed to facilitate greater machine interpretability because it is a very expressive language. The biggest challenge of course is the development of ontologies for objects which it involves technical expertise and subject expertise.

With the rich retrieval possibility provided by the use of ontologies and the constant developments happening in the browser market especially the unique cookie cashing and optimizing the browser history along with the social networking Friend Of A Friend (FOAF) relationship management hierarchy it is possible to provide a context based search result for anyone searching for any specific concept. The byproduct of such an exercise will be a robust recommender system which will not only provide the need of the user but at the same time provide recommendations on what he might need. This technology will also increase the accuracy of the results by providing smarter results by first searching for concepts and making the results more meaningful and interactive for people who want to further their search. Kruk and McDaniel (2009) argue that "more involvement of semantic technologies, in order to deliver even more user friendly, solutions; semantic and social services can at least act partially on behalf of human librarians".

4. Semantic Digital Libraries

As more experiments are being ordained in the use of semantic web, as library professionals, it is important to see how these technologies will reshape the service delivery in digital libraries. Macgregor points out that "for many digital libraries or cultural institutions, the semantic web offers an opportunity to better expose valuable digital resources" (Macgregor, 2008). Kurk et. al. asserts that "Metadata is the cornerstone of Semantic Web and very well be the corner stone for Semantic Digital Libraries" (Kurk, 2011). Judicious use of metadata and the proper assignment of vocabularies for different objects along with the enormous capabilities which the future browsers are capable of providing, Semantic Digital Library will be a big boon to the information science. Macgregor further observes that the "Semantic Web technologies are capable of enhancing digital libraries or repositories by facilitating improved navigation and retrieval within heterogeneous document environments, user profiling, personalization and contextualization, improved user interface and human computer interaction" (Macgregor, 2008).

The focus of Semantic Digital Libraries will be based on integrating a number of information sources based on different metadata resources such as the rich metadata derived from the Resource Description and Access (RDA), user profiles, book marks, user and publisher tags, and taxonomies. Kurk et al. observes that "the multiplicity of different types of descriptions used in a digital library system can cause many problems when trying to interconnect them. The solution lies in taking advantage of the information they have and find a framework to manage and translate between different metadata" (Kurk, 2011). It is important to note that there are a number of Semantic Digital Library models which are already in the experimental stage around the world. Important among them are 1) JeromeDL (www.jeromedl.org) which is an open source Ontology based Semantic Digital Library architecture which provides ontology based resource management, retrieval, user management and communication link, 2) Muruca Digital Library Solution (http://www.muruca.org/) once again a semantic knowledge Base System and 3). Talia (http://ceur-ws.org/Vol-368/paper4.pdf) a semantic based library system are few experiments in developing a strong semantic digital library platform.

For libraries which are familiar with standard metadata schemes and basic cataloguing rules its much simpler to move into semantic digital libraries since they already use controlled vocabularies, taxonomies or even ontologies while cataloguing the objects. The library objects found in the Online Public Library Catalogues are catalogued using cataloguing classification schemes, taxonomies, thesauri and recognized subject headings to strengthen the metadata. With the introduction of semantic concepts the newer addition to the existing practice will be to use Web

Ontology Language (OWL) or through the usage of Resource Description Framework (RDF). Once these metadata can be strengthened based on the concept that every data item should have a unique web identifier called a URI (Uniform Resource Identifier) and that every data item can be connected to every other item the goal of semantic search can be achieved. The "Simple Knowledge Organization Scheme"(SKOS) (Simple Knowledge Organisation Systems (SKOS)., 2011) model is an example of how knowledge can be organized using web ontologies. SKOS also provides specifications and standards to support the use of knowledge organization.

5. Semantic Digital Libraries and Future Library Services:

There are a number of indispensable services which are possible and are being implemented from the semantic digital library framework. Notable among them are:

Enhanced Search and Browsing
Recommender systems
Collaborative referencing
Knowledge organization

5.1 Enhanced Search and Browsing:

One of the main objectives of the semantic digital library framework is to provide an impeccable resource discovery service which is not able to be provided by the current digital library systems. The drawback with the current search and browse experience is the inability of users to filter, exploit and move across different media types and complex objects. With the advent of semantic search frame work a push towards the search experience becoming more personalized cannot be ruled out. Farran believes that "two elements determine the functionalities of the desired personalization system: first the user's profile, including navigational history and the user preference"(Farren, 2005). With the implementation of Semantic Digital Library framework such an enhanced search and browsing experience will become a reality.

5.2 Recommender Systems

A number of current digital library systems provide a good recommender system, yet the downfall of these systems are that they follow the traditional knowledge classification. With a use of exhaustive ontologies and reasoning engines it is possible to exploit complex relations between results. Instead of a traditional classification system, a semantic digital library framework should be able to provide a recommender system based on context, resources, collaborative filtering and user annotations.

5.3 Collaborative Referencing

Semantic web technologies depend on subject experts to populate the ontologies and the future of semantic digital libraries provide an ample opportunities for collaborative referencing of subjects using networks and consortia on special subjects. Initiatives like AGROVOC, a multilingual Agricultural Thesaurus (http://aims.fao.org/vest-registry/vocabularies/agrovoc-multilingual-agricultural thesaurus) which provides tools and collaborative environment to build multilingual ontology and terminology systems in the area of Agriculture referencing and Protégé (http://protege.stanford.edu/) a powerful ontology editor for creating knowledge bases in the field of biomedicine and ecommerce are the future of collaborative referencing in semantic digital libraries.

5.4 Knowledge Organisation

Semantic web provides ample scope for library professionals in the organization of Knowledge since it is the common work which they have been doing all along. The corner stone of Semantic web is web ontology. Currently information professionals use classification schemes, thesauri, subject heading guides and taxonomies to sharpen their metadata. With the introduction of Resource Description and Access (RDA) standards the resources will further qualified upto the context and within a context. Using OWL it is possible to further organize knowledge into micro contextual relation. The Simple Knowledge Organization Scheme (SKOS) model from W3C (https://www.w3.org/2004/02/skos/) is the beginning of knowledge organization using web ontologies.

6. Conclusion

As emphasized in the beginning of this paper the emergence of web 2.0 has triggered a second wave of transformation in libraries and library services which has been further elaborated by the semantic web technologies. This has also transformed the librarians in their service delivery and access control. This transformation has also brought-in more power to the users and more control to the librarians. The future libraries are envisaged to connect – people, technology and information in the context which will be more meaningful and time saving. The future librarians who will have to perform in these transformations will have to develop much deeper level of understanding of these catalysts where more and more interactions are needed. As it has been always predicted, the upcoming technologies and services will provide much needed boost for libraries and will there is plenty of scope to believe the libraries and librarians are poised for an exciting future.

Reference

1. Burke, M. (2009). The semantic web and the digital library. Aslib Proceedings:New Information Perspectives, Vol. 61, No.3, 316-322. .
2. Ferran, N. (2005). Towards personalization in digital libraries through ontologies. Library Management, Vol. 26, No. 4/5, 206-217.
3. Jetty, S. et. al. (2011). OPAC 2.0: Towards the next generation of online library catalogues. In: Proceedings of the International conference of Asian Special Libraries, Tokyo. Available at http://eprints.mdx.ac.uk/7964/1/OPAC_2.pdf.
4. Kruk, S. R. and McDaniel (2009). Goals of Semantic Digital Libraries. In Semantic Digital Libraries, Kurk, S. R. & McDaniel, B. (Eds.). Heidelberg, Berlin: Springer-Verlag. pp. 71-76.
5. Kurk, S. R. et. al (2005). JeromeDL – Adding Semantic Web Technologies to Digital Libraries. In DEXA 2005, K.V. Andersen et. al. (eds.). Berlin, Heidelberg: Springer-Verlag. pp. 716-725.
6. Macgregor, G. (2008). Introduction to a special issue on digital libraries and the semantic web: context, applications and research. Library Review, Vol.57, No.3, 173-177.
7. Sure, Y. (2005). Semantic Web technologies for digital libraries. Library Management, Vol. 26, No. 4/5, 190-195.
8. Synak, M, Dabrowski, M. and Kruk, S. R. (2009). Semantic Web and Ontologies. In Semantic Digital Libraries, Kurk, S. R. & McDaniel, B. (Eds.). Heidelberg, Berlin: Springer-Verlag. pp. 41-54.
9. Warren, P. (2005). Applying semantic technology to a digital library: a case study. Library Management, Vol. 26, No.4/5,, 196-205.

USE OF INTERNET BY THE FACULTY MEMBERS OF G.T.N. ARTS COLLEGE, DINIDIGUL DISTRICT – A STUDY

Dr.S.Aravind
Librarian, Central Library, G.T.N. Arts College, Dindigul

Abstract

This article explained the use of Internet by the Faculty members of G.T.N. Arts College, Dindigul District. Internet has grown up as the most popular and effective information tools of present age. High quality of information is often stored in dedicated of digital libraries. The internet provides technologies that are about help to meet these challenges and required the right information most of the staffs and students are mostly using of the internet time spending in the current occasions, the faculty members use internet are the Frequency of usage are daily, hours spending in Internet from library, on the basis of mode learning the internet are Self Learning and preferring on-line teaching and learning are high level.
Keywords: Internet, Digital resources, College Faculty Members.

Introduction

A library is collection of sources of information and similar resources, made accessible to a defined community for reference or borrowing. It provides physical or digital access to material and may be a physical building or room, or a virtual space, or both. A library's collection include books, periodicals, newspapers, manuscripts, films, maps, prints, documents, microform, CDs, cassettes, videotapes, DVDs, e-books and other formats. The Internet presents a challenge for Library and Information professionals in providing information services. The Internet many resources that can be harnessed by for scholarly work, use of internet changing research, teaching and learning. The expansion of available information brings increasing dependence on the sources. Use of internet by faculty members is an important area of today information environment. The Internet plays a pivotal role in information and communication needs of academic institutions. The college faculty have also been at the forefront of the internet development, staffs carrying on the tradition of campus innovation, have played a major part in recent internet development.

Objectives

To study the purpose of using internet by the staff members

To identify the time of spent for internet

To discover using the purpose of internet

To find out the frequency of library visit in the college library

Scope of the Study

The present study is aimed to analyses the use of internet by Faculty members in G.T.N. Arts College, Dindigul District. This study is only focusing on G.T.N. Arts College Faculty members only.

Methodology

The Questionnaires were used to evaluate G.T.N. Arts College Faculty members familiarity with use of Internet related resources. The Questionnaire specified that the survey is for faculty members and include a brief description of the survey and estimates that it will take approximately 20 minutes to complete. The information sheet followed a question and answer format to provide participants with information about research studies in general and this study in particular.

Data Analysis and Interpreation

The collected information is tabulated by using statistical method, table and percentage. The data analyse are given below.

Table 1 Distribution of the Sample

S.No.	Designation	No. of Questionnaire	No. of Questionnaire	Percentage
1	HOD	10	10	100.00%
2	Associate	10	09	90.00%
3	Assistant	60	57	95.00%
	Total	**80**	**76**	**95.00%**

Source: Primary data

In the table 1 indicates that the distribution of the sample. It is inferred from the survey 80 questionnaires are distributed, after 76 (95.00%) questionnaires are respondents.

Table 2 Distribution of Gender

S.No.	Gender	No. of Respondents	Percentage
1	Male	41	52.60%
2	Female	35	47.40%
	Total	**76**	**100.00%**

Source: Primary data

The above table shows the gender wise distribution. It is inferred from the survey, 52.6o% of the respondents are male and 47.40% of the respondents are female.

Table 3 Distributions of Age Wise

S.No.	Age	No. of Respondents	Percentage
1	Below 40 Years	41	53.95%
2	41 Years – 50 Years	27	35.53%
3	Above 51 Years	08	10.52%
	Total	**76**	**100.00%**

Source: Primary data

Table explains the details of age wise classification. It is observed from the table that 53.95% of respondents are below 40 years of age, 35.53% of the respondents are 41 years - 50 years of age and 10.52% of the respondents are above 51 years of age. So majority of the respondents are in the age group of below 40 years of age group.

Table 4 Distribution of Frequency of Library Usage

S.No.	Frequency of Library Use	Assistant Professor		Associate Professor		HOD		Total	
1	Daily	17	22.37%	02	2.63%	02	2.63%	21	27.63%
2	Once in a week	09	11.84%	02	2.63%	01	1.32%	12	15.79%
3	Once in a month	19	25.00%	03	3.95%	04	5.26%	26	34.21%
4	As all when Required	12	15.79%	02	2.63%	03	3.95%	17	22.37%
	Total	**57**	**75.00%**	**09**	**11.84%**	**10**	**13.16%**	**76**	**100.00%**

Source: Primary data

It is indicates from the above table that 21(27.63%) of the respondents used library daily, 12(15.79%) of the respondents used the library once in week followed by the 26(34.21%) of the respondents used the library once in a month and 17(22.37%) of the respondents used library when required. Majority of the Faculty members used library once in a month.

It is indicate from the table 5 that 32.00% of the respondents are spending in internet 3-4 hours, 23.70% of the respondents are spending in internet 2-3 hours, 28.20% respondents are spending internet 4-5 hours, 14.70% of the respondents are spending in internet less than 2 hours and only 1.90% of the respondents are spending the internet more than 5 hours.   So based on the result it could seen clearly from the above discussion more than respondents are spending in internet up to 4 hours from library.

Table 5 Distribution of Respondents on the Basis of Hours Spending in Internet

S.No.	Hours spending in Internet	No. of Respondents	Percentage
1	3-4 hours	28	32.00%
2	2-3 hours	02	23.70%
3	4-5 hours	24	28.20%
4	Less than 2 hours	20	14.70%
5	More than 5 hours	02	01.90%
	Total	**76**	**100.00%**

Source: Primary data

Table 6 Distribution of Respondents on the Basis of Mode of Learning the Internet

S.No.	Mode of Learning Internet	No. of Respondents	Percentage
1	Self Learning	33	41.60%
2	From Faculty and friends	35	44.80%
3	Training Course from experts	08	13.40%
	Total	**76**	**100.00%**

Source: Primary data

Table 6 indicates on the basis of mode of learning the internet 41.60% of the respondents are self learning, 44.80 % of the respondents are learning from faculty and friends and 13.40 % of the respondents are learning from training courses and exports. So it could be seen clearly from the above discussion more than respondents are learning internet from Faculty and friends.

Table 7 Distribution of Respondents According to their use the Internet Primarily

S.No.	Purpose use of internet	Assistant Professor		Associate Professor		HOD		Total	
1	Research Paper	51	67.11%	9	11.84%	8	10.53%	**68**	**89.47%**
2	Electronic Books	45	59.21%	7	9.21%	6	7.89%	**58**	**76.32%**
3	Electronic Journals	54	71.05%	9	11.84%	10	13.16%	**73**	**96.05%**
4	Electronic database	14	18.42%	4	5.26%	3	3.95%	**21**	**27.63%**
5	Others	45	59.21%	6	7.89%	7	9.21%	**58**	**76.32%**

Source: Primary data

From the above table it is inferred that 89.47 percent of the respondents are use the internet for research paper, 76.32 percent of the respondents are use the internet for electronic books, 96.05 percent of the respondents are use the internet for electronic journals, 27.63 percent of the respondents are use the internet for electronic database, 76.32 percent of the respondents are use the internet for other purpose. So that the majority of the respondents are use the internet for electronic journals.

Table 8: Reason for Using the Internet Resources

S.No	Category	Time saving		More Flexible		Easy to use		Easy to handle	
1	Assistant Professor	56	73.68%	48	63.16%	52	68.42%	51	67.11%
2	Associate Professor	9	11.84%	9	11.84%	8	10.53%	7	9.21%
3	HOD	10	13.16%	10	13.16%	9	11.84%	9	11.84%
	Total	75	98.68%	67	88.16%	69	90.79%	67	88.16%

Source: Primary data

Table 8 shows the reasons why the respondents use the internet resources. 56 (73.68%) Assistant Professors, 9 (11.84%) Associate Professors and 10(13.16%) HOD use internet resources because they help the respondents save their time. While 48(63.16%) Assistant Professors, 9 (11.84%) Associate Professors and 10(13.16%) HOD expressed that the internet resources are more flexible, 52(68.42%) Assistant Professors, 8 (10.53%) Associate Professors and 09(11.84%) HODs felt that the internet resources are easy to use. 51(67.11%) Assistant Professors, 7 (9.21%) Associate Professors and 09(11.84%) HODs are of the opinion that they use internet resources for they are easy to handle.

Table 9 Distribution of preferring and Satisfaction of Internet Resource

S.No	Category	Fully satisfied	Satisfied	Dissatisfied	Total
1	Assistant Professor	41	7	9	57
		53.95%	9.21%	11.84%	75.00%
2	Associate Professor	4	3	2	9
		5.26%	3.95%	2.63%	11.84%
3	HOD	5	4	1	10
		6.58%	5.26%	1.32%	13.16%
	Total	50	14	12	76
		65.79%	18.42%	15.79%	100.00%

Source: Primary data

Table 9 shows the level of preferring and satisfaction of internet resources among the respondents. Among Assistant Professors, 41(53.95%) respondents are fully satisfied, 07(9.21%) respondents are satisfied and 9(11.84%) respondents are dissatisfied. Among the Associate Professors, 4(5.26%) respondents are fully satisfied, 3(3.95%) respondents are Satisfied, 2(2.63%) respondents are dissatisfied. Among the HODs, 5(6.58%) respondents are fully satisfied, 4(5.26%) respondents are satisfied, 1(1.32%) respondents are dissatisfied.

Conclusion

Now days the development of information and communication technology by connected with networks. It uses for primarily for teaching, learning, personal and recreational purposes. It was also seen that majority of the respondents highly use internet resources. The respondents rate first order of priority to just satisfaction with internet resource facilities available in their institution, high level of satisfaction the second, normal level satisfaction their and dissatisfaction with internet resources facilities available in their institutions the last. However it was found that the use of internet in G.T.N. Arts College was quite attractive and encouraging.

References

1. Asemi, A.(2005). Information searching habite of internet users : A Case study on the Medical Science University of Isfahan, Iran. Webology 1 (2).

2. Ansari, Al. Husain (2014). Internet use by the faculty members of Kuwait University, The Electronic Library, 24(6), 791-803.

3. Kiran Kumar G and Mallinath Kumbar. (2012). Use of Internet Based Electronic Information Resources by the Faculty of PES College of Engineering, Mandya: A Study. Conference Proceedings on Empowering Libraries for Lifelong Learning Skills. ISBN: 978-81-890-6591-1. Pp. 454-465.

4. Shoukat Ali. (2014). Internet Literacy Among UG and Post Graduate Students: Seshadripuram Institutions, Yelahanka, Bangalore. National Conference Proceedings on Integrating ICT in Academic Libraries: Making a Difference in Knowledge Age. ISBN: 9-788192-756912. Pp. 702-709.

5. Mahantesh Ajagond. (2015). Essential Information Skills for Internet Surfing in the College Libraries: A Survey. Conference Proceedings on Emerging Technologies and Future of Libraries: Issues and Challenges. ISBN: 978-93-5124-610-7. Pp. 294-305.

6. Javed Ahmad Lone. (2016). Internet Search Tools and Their use: A Survey of Undergraduate Students. National Conference Proceedings on Library and Information Services for all : Reaching the Unreached in the Digital Era. ISBN: 978-93-5254-978-8. Pp. 304-310.

7. Moses Dayan, J., Vijayakumar K. and Murugan, K. (2016). Use of Internet by the Faculty Members of Polytechnic colleges in Tuticorin District: A Study. Proceedings of the DRDO supported National Conference on Crativity, Innovation and Transformation in Libraries. SALIS 2016. Pp. 500-504.

8. Manjunath, K S, Pradeep Kumar D & Arun Kumar, R. (2016). GOOGLE Apps for Librarians. National Conference Proceedings on Innovative Practices in Libraries. Tumkur University and RRRLF.ISBN: 978-93-82694-30-4. Pp.102-109.

A STUDY NEW TYPES OF FUNCTIONS (1, 2)*- - CLOSED SETS ON BITOPOLOGICAL SPACES

Dr.A.Arivuchelvam
Assistant Professor,
MTN College, Pasumalai, Madurai

Dr.S.Rosemary
Associate Professor and Head,
Fatima College, Madurai

Abstract

The primary purpose of this paper is to introduce and study new types of functions $(1,2)^*$- g - **CLOSED SETS** on bitopological spaces. Also, we present and study $(1,2)^*$- g''' -closed sets. Furthermore, We obtain basic Example and Preservation theorem of $(1,2)^*$- g - **CLOSED SETS** on bitopological spaces

Key words: $(1,2)^*$- g -closed, $(1,2)^*$- gs -closed, $(1,2)^*$-g-closed, $(1,2)^*$-gs-closed $(1,2)$ *-g-closed, $(1,2)$ *-sg-closed, $(1,2)$ *-ψ -closed, $(1,2)$ *-ω -closed, $(1,2)^*$- gs -closed, $(1,2)^*$-gsp-closed.

Introduction

In 1963 Levine [10] introduced the notion of semi-open sets. According to Cameron this notion was Levine's most important contribution to the field of topology. The motivation behind the introduction of semi-open sets was a problem of Kelley i.e., to show that cl(U) = cl(U   D) for all open sets U and dense sets D. He proved that U is semi-open if and only if cl(U) = cl(U   D) for all dense sets D and D is dense if and only if cl(U) = cl(U   D) for all semi-open sets U. Since the advent of the notion of semi-open sets, many mathematicians worked on such sets and also introduced some other notions, among others, preopen sets [11],   -open sets [12] and β-open sets [1] (Andrijevic [2] called them semi-pre open sets). It has been shown in [8] recently that the notion of preopen sets and semi-open sets are important with respect to the digital plane.

Levine [9] also introduced the notion of g-closed sets and investigated its fundamental properties. This notion was shown to be productive and very useful. For example, it is shown that g-closed sets can be used to characterize the extremally disconnected spaces and the submaximal spaces (see [5] and [6]). Moreover, the study of g-closed sets led to some separation axioms between T_0 and T_1 which proved to be useful in computer science and digital topology (see [7] and [8]).   Recently, Bhattacharya and Lahiri [4], Arya and Nour [3], Sheik John [20] and Rajamani and Viswanathan [13] introduced sg-closed sets, gs-closed sets,   -closed sets and gs -

closed sets respectively. In this chapter, we introduce a new class of sets namely $(1,2)^*$-g-closed sets in bitopological spaces. This class lies between the class of $\tau_{1,2}$-closed sets and the class of $(1,2)^*$-g-closed sets. This class also lies between the class of $\tau_{1,2}$-closed sets and the class of $(1,2)^*$-α-closed sets.

Preliminaries

Throughout the study (X, τ_1, τ_2), (Y, σ_1, σ_2) and (Z, U_1, U_2) (or simply X, Y and Z) denote bitopological spaces.

Recall the new type of weaker form of open sets in bitopological spaces.

Definition 1.2.1 [16]

Let S be a subset of X. Then S is said to be

$\tau_{1,2}$-open if $S = A \cup B$ where $A \in \tau_1$ and $B \in \tau_2$.

We call $\tau_{1,2}$-closed set is the complement of $\tau_{1,2}$-open.

Example 1.2.2 [16]

Let $X = \{a, b, c\}$ with $\tau_1 = \{\emptyset, X, \{a\}\}$ and $\tau_2 = \{\emptyset, X, \{b\}\}$. Then the sets in $\{\emptyset, X, \{a\}, \{b\}, \{a, b\}\}$ are called $\tau_{1,2}$-open and the sets in $\{\emptyset, X, \{b, c\}, \{a, c\}, \{c\}\}$ are called $\tau_{1,2}$-closed.

Definition 1.2.3 [16]

Let S be a subset of X. Then

i) The $\tau_{1,2}$-interior of S, denoted by $\tau_{1,2}$-int (S) or $\tau_{1,2}$-int (S), is defined by $\cup\{F : F \subseteq S$ and F is $\tau_{1,2}$-open$\}$;

ii) The $\tau_{1,2}$-closure of S, denoted by $\tau_{1,2}$-cl (S) or $\tau_{1,2}$-cl (S), is defined by $\cap\{F : S \subseteq F$ and F is $\tau_{1,2}$-closed$\}$.

Definition 1.2.4

A subset A of a space X is called:

i) $(1,2)^*$-semi-open set [58] if $A \subseteq \tau_{1,2}$-cl($\tau_{1,2}$-int(A));

ii) $(1,2)^*$-preopen set [59] if $A \subseteq \tau_{1,2}$-int($\tau_{1,2}$-cl(A));

iii) $(1,2)^*$-α-open set [55] if $A \subseteq \tau_{1,2}$-int($\tau_{1,2}$-cl($\tau_{1,2}$-int(A)));

iv) $(1,2)^*$-semi-preopen [60] if $A \subseteq \tau_{1,2}$-cl($\tau_{1,2}$-int($\tau_{1,2}$-cl(A)));

v) $(1,2)^*$-regular open set [61] if $A = \tau_{1,2}$-int($\tau_{1,2}$-cl(A)).

The complements of the above mentioned open sets are called their respective closed sets.

The $(1,2)^*$-preclosure [16] (resp. $(1,2)^*$-semi-closure [15], $(1,2)^*$-α-closure [14], $(1,2)^*$-semi-pre-closure [17]) of a subset A of X, denoted by $(1,2)^*$-pcl(A) (resp. $(1,2)^*$-

scl(A), $(1,2)^*$- cl(A), $(1,2)^*$-spcl(A)) is defined to be the intersection of all $(1,2)^*$-preclosed (resp. $(1,2)^*$-semi-closed, $(1,2)^*$- -closed, $(1,2)^*$-semi-preclosed) sets of X containing A. It is known that $(1,2)^*$-pcl(A) (resp. $(1,2)^*$-scl(A), $(1,2)^*$- cl(A), $(1,2)^*$-spcl(A)) is a $(1,2)^*$-preclosed (resp. $(1,2)^*$-semi-closed, $(1,2)^*$- -closed, $(1,2)^*$-semi-preclosed) set. For any subset A of an arbitrarily chosen bitopological space, the $(1,2)^*$-semi-interior [58] (resp. $(1,2)^*$- -interior [14], $(1,2)^*$-preinterior [16]) of A, denoted by $(1,2)^*$-sint(A) (resp. $(1,2)^*$- int(A), $(1,2)^*$-pint(A)), is defined to be the union of all $(1,2)^*$-semi-open (resp. $(1,2)^*$- -open, $(1,2)^*$-preopen) sets of X contained in A.

Definition 1.2.5

A subset A of a space X is called:

i) a $(1,2)^*$-generalized closed (briefly $(1,2)^*$-g-closed) set [19] if $\tau_{1,2}$-cl(A) U whenever A U and U is $\tau_{1,2}$-open in X. The complement of $(1,2)^*$-g-closed set is called $(1,2)^*$-g-open set;

ii) a $(1,2)^*$-semi-generalized closed (briefly $(1,2)^*$-sg-closed) set [15] if $(1,2)^*$-scl(A) U whenever A U and U is $(1,2)^*$-semi-open in X. The complement of $(1,2)^*$-sg-closed set is called $(1,2)^*$-sg-open set;

iii) a $(1,2)^*$-generalized semi-closed (briefly $(1,2)^*$-gs-closed) set [18] if $(1,2)^*$-scl(A) U whenever A U and U is $\tau_{1,2}$-open in X. The complement of $(1,2)^*$-gs-closed set is called $(1,2)^*$-gs-open set;

iv) an $(1,2)^*$- -generalized closed (briefly $(1,2)^*$- g-closed) set [8] if $(1,2)^*$- cl(A) U whenever A U and U is $\tau_{1,2}$-open in X. The complement of $(1,2)^*$- g-closed set is called $(1,2)^*$- g-open set;

v) a $(1,2)^*$-generalized semi-preclosed (briefly $(1,2)^*$-gsp-closed) set [19] if $(1,2)^*$-spcl(A) U whenever A U and U is $\tau_{1,2}$-open in X. The complement of $(1,2)^*$-gsp-closed set is called $(1,2)^*$-gsp-open set;

vi) a $(1,2)^*$- -closed [19] if $\tau_{1,2}$-cl(A) U whenever A U and U is $(1,2)^*$-semi-open in X. The complement of $(1,2)^*$- -closed set is called $(1,2)^*$- -open set;

vii) a $(1,2)^*$- gs -closed set [18] if $(1,2)^*$- cl(A) U whenever A U and U is $(1,2)^*$-semi-open in X. The complement of $(1,2)^*$- gs -closed set is called $(1,2)^*$- gs -open set;

viii) $(1,2)^*$-g*s-closed set [18] if $(1,2)^*$-scl(A) U whenever A U and U is $(1,2)^*$-gs-open in X. The complement of $(1,2)^*$-g*s-closed set is called $(1,2)^*$-g*s-open set;

xi) a $(1,2)^*$- g -closed set [14] if $(1,2)^*$- cl(A) U whenever A U and U is $(1,2)^*$-gs-open in X. The complement of $(1,2)^*$- g -closed set is called $(1,2)^*$- g -open set.

Definition 1.2.9 [19]

A subset S of X is said to be $(1,2)^*$-locally closed if S = U $\cap$ F, where U is $\tau_{1,2}$-open and F is $\tau_{1,2}$-closed in X.

$(1,2)^*$- g -CLOSED SETS

We introduce the following definition.

Definition 1.3.1

A subset A of X is called a $(1,2)^*$- g -closed set if $\tau_{1,2}$-cl(A) $\subseteq$ U whenever A $\subseteq$ U and U is $(1,2)^*$-gs-open in X.

The complement of $(1,2)^*$- g -closed set is $(1,2)^*$- g -open.

The collection of all $(1,2)^*$- g -closed (resp. $(1,2)^*$- g -open) sets of X is denoted by $(1,2)^*$- G C(X) (resp. $(1,2)^*$- G O(X)).

Proposition 1.3.2

Every $\tau_{1,2}$-closed set is $(1,2)^*$- g -closed.

Proof

If A is any $\tau_{1,2}$-closed set in X and G is any $(1,2)^*$-gs-open set containing A, then G $\supseteq$ A = $\tau_{1,2}$-cl(A). Hence A is $(1,2)^*$- g -closed. The converse of Proposition 1.3.2 need not be true as seen from the following example.

Example 1.3.3

Let X = {a, b, c} with τ_1 = { $\emptyset$, {a, b}, X} and τ_2 ={ $\emptyset$, X}. Then $(1,2)^*$- G C(X) = { $\emptyset$, {c}, {a, c}, {b, c}, X}. Here, A = {a, c} is $(1,2)^*$- g -closed set but not $\tau_{1,2}$-closed.

Proposition 1.3.4

Every $(1,2)^*$- g -closed set is $(1,2)^*$- g -closed.

Proof

If A is a $(1,2)^*$- g -closed subset of X and G is any $(1,2)^*$-gs-open set containing A, then G $\supseteq$ $\tau_{1,2}$-cl(A) $\supseteq$ $(1,2)^*$- cl(A). Hence A is $(1,2)^*$- g -closed in X. The converse of Proposition 1.3.4 need not be true as seen from the following example.

Example 1.3.5

Let X = {a, b, c} with τ_1 = { $\emptyset$, {b}, X} and τ_2 = { $\emptyset$, X}. Then $(1,2)^*$- G C(X) = { $\emptyset$, {a, c}, X} and $(1,2)^*$- G C(X) = { $\emptyset$, {a}, {c}, {a, c}, X}. Here, A = {a} is $(1,2)^*$- g -closed but not $(1,2)^*$- g -closed set in X.

Proposition 1.3.6

Every $(1,2)^*$-g-closed set is $(1,2)^*$-g*s-closed.

Proof

If A is a $(1,2)^*$-g-closed subset of X and G is any $(1,2)^*$-gs-open set containing A, then G $\tau_{1,2}$-cl(A) $(1,2)^*$-scl(A). Hence A is $(1, 2)^*$-g*s-closed in X. The converse of Proposition 1.3.6 need not be true as seen from the following example.

Example 1.3.7

In Example 1.3.5, $(1, 2)^*$-G*SC(X) = { , {a}, {c}, {a, c}, X}. Here, A = {c} is $(1,2)^*$-g*s-closed but not $(1,2)^*$-g-closed set in X.

Proposition 1.3.8

Every $(1,2)^*$-g-closed set is $(1,2)^*$- -closed.

Proof

Suppose that A G and G is $(1,2)^*$-semi-open in X. Since every $(1,2)^*$-semi-open set is $(1,2)^*$-gs-open and A is $(1,2)^*$-g-closed, therefore $\tau_{1,2}$-cl(A) G. Hence A is $(1,2)^*$- -closed in X. The converse of Proposition 1.3.8 need not be true as seen from the following example.

Example 1.3.9

Let X = {a, b, c} with τ_1 = { , {a}, X} and τ_2 = { , X, {b, c}}. Then $(1,2)^*$-G C(X) = { , {a}, {b, c}, X} and $(1,2)^*$- C(X) = P(X). Here, A = {a, c} is $(1,2)^*$- -closed but not $(1,2)^*$-g-closed set in X.

Proposition 1.3.10

Every $(1, 2)^*$-g*s-closed set is $(1,2)^*$-sg-closed.

Proof

Suppose that A G and G is $(1,2)^*$-semi-open in X. Since every $(1,2)^*$-semi-open set is $(1,2)^*$-gs-open and A is $(1,2)^*$-g*s-closed, therefore $(1,2)^*$-scl(A) G. Hence A is $(1, 2)^*$-sg-closed in X. The converse of Proposition 1.3.10 need not be true as seen from the following example.

Example 1.3.11

Let X = {a, b, c} with τ_1 = { , {a}, {b, c}, X} and τ_2 ={ , X}. Then $(1,2)^*$-G*SC(X) = { , {a}, {b, c}, X} and $(1,2)^*$-SGC(X) = P(X). Here, A = {a, b} is $(1,2)^*$-sg-closed but not $(1,2)^*$-g*s-closed set in X.

Proposition 1.3.12

Every $(1, 2)^*$- -closed set is $(1,2)^*$-gs-closed.

Proof

If A is a $(1,2)^*$- -closed subset of X and G is any $(1,2)^*$-semi-open set containing A, then G $\tau_{1,2}$-cl(A) $(1,2)^*$- cl(A). Hence A is $(1,2)^*$-gs-closed in X. The converse of Proposition 1.3.12 need not be true as seen from the following example.

Example 1.3.13

Let X = {a, b, c} with τ_1 = { , {a}, X} and τ_2 = { , X}. Then $(1,2)^*$- C(X) = { , {b, c}, X} and $(1,2)^*$-GS C(X) = { , {b}, {c}, {b, c}, X}. Here, A = {b} is $(1,2)^*$-gs-closed but not $(1,2)^*$- -closed set in X.

Proposition 1.3.14

Every $(1,2)^*$-g -closed set is $(1,2)^*$-g-closed.

Proof

If A is a $(1,2)^*$-g -closed subset of X and G is any $\tau_{1,2}$-open set containing A, since every $\tau_{1,2}$-open set is $(1,2)^*$-gs-open, we have G $\tau_{1,2}$-cl(A). Hence A is $(1,2)^*$-g-closed in X. The converse of Proposition 1.3.14 need not be true as seen from the following example.

Example 1.3.15

Let X = {a, b, c} with τ_1 = { , {b, c}, X} and τ_2 = { , {a}, X}. Then $(1,2)^*$-G C(X) = { , {a}, {b, c}, X} and $(1,2)^*$-G C(X) = P(X). Here, A = {a, b} is $(1,2)^*$-g-closed but not $(1,2)^*$-g -closed set in X.

Proposition 1.3.16

Every $(1,2)^*$-g -closed set is $(1,2)^*$-gs-closed.

Proof

If A is a $(1,2)^*$-g -closed subset of X and G is any $(1,2)^*$-semi-open set containing A, since every $(1,2)^*$-semi-open set is $(1,2)^*$-gs-open, we have G $\tau_{1,2}$-cl(A) $(1,2)^*$-cl(A). Hence A is $(1,2)^*$-gs-closed in X. The converse of Proposition 1.3.16 need not be true as seen from the following example.

Example 1.3.17

Let X = {a, b, c} with τ_1 = { , {a}, {b, c}, X} and τ_2 ={ , X}. Then $(1,2)^*$-G C(X) = { , {a}, {b, c}, X} and $(1,2)^*$- GS C(X) = P(X). Here, A = {a, c} is $(1,2)^*$- gs -closed but not $(1,2)^*$-g -closed set in X.

Proposition 1.3.18

Every $(1,2)^*$-g -closed set is $(1,2)^*$- g-closed.

Proof

If A is a $(1,2)^*$-g -closed subset of X and G is any $\tau_{1,2}$-open set containing A, since every $\tau_{1,2}$-open set is $(1,2)^*$-gs-open, we have G $\tau_{1,2}$-cl(A) $(1,2)^*$- cl(A). Hence A is $(1, 2)^*$- g-closed in X. The converse of Proposition 1.3.18 need not be true as seen from the following example.

Example 1.3.19

Let X = {a, b, c} with τ_1 = { , {c}, X} and τ_2 = { , {a, b}, X}. Then $(1,2)^*$-G C(X) = { , {c}, {a, b}, X} and $(1,2)^*$- GC(X) = P(X). Here, A = {a, c} is $(1,2)^*$- g-closed but not $(1,2)^*$-g -closed set in X.

Proposition 1.3.20

Every $(1,2)^*$-g -closed set is $(1,2)^*$-gs-closed.

Proof

If A is a $(1,2)^*$-g -closed subset of X and G is any $\tau_{1,2}$-open set containing A, since every $\tau_{1,2}$-open set is $(1,2)^*$-gs-open, we have G $\tau_{1,2}$-cl(A) $(1,2)^*$-scl(A). Hence A is $(1, 2)^*$-gs-closed in X. The converse of Proposition 1.3.20 need not be true as seen from the following example.

Example 1.3.21

Let X = {a, b, c} with τ_1 = { , {a}, X} and τ_2 ={ , X}. Then $(1,2)^*$-G C(X) = { , {b, c}, X} and $(1,2)^*$-GS C(X) = { , {b}, {c}, {a, b}, {a, c}, {b, c}, X}. Here, A = {c} is $(1,2)^*$-gs-closed but not $(1,2)^*$-g -closed set in X.

Proposition 1.3.22

Every $(1, 2)^*$-g -closed set is $(1,2)^*$-gsp-closed.

Proof

If A is a (1,2)*-g-closed subset of X and G is any $_{1,2}$-open set containing A, every $_{1,2}$-open set is (1,2)*-gs-open, we have G $_{1,2}$-cl(A) (1,2)*-spcl(A). Hence A is (1,2)*-gsp-closed in X. The converse of Proposition 1.3.22 need not be true as seen from the following example.

Example 1.3.23

In Example 1.3.21, (1,2)*-GSP C(X) = { , {b}, {c}, {a, b}, {a, c}, {b, c}, X}. Here, A = {c} is (1,2)*-gsp-closed but not (1,2)*-g-closed set in X.

Remark 1.3.24

The following example shows that (1,2)*-g-closed sets are independent of (1,2)*--closed sets and (1,2)*-semi-closed sets.

Example 1.3.25

Let X = {a, b, c} with $_1$ = { , {a, b}, X} and $_2$ = { , X}. Then (1,2)*-G C(X) = { , {c}, {a, c}, {b, c}, X} and (1,2)*- C(X) = (1,2)*-S C(X) = { , {c}, X}. Here, A = {a, c} is (1,2)*-g-closed but it is neither (1,2)*--closed nor (1,2)*-semi-closed in X.

Example 1.3.26

Let X = {a, b, c} with $_1$ = { , {a}, X} and $_2$ = { , X}. Then (1,2)*-G C(X) = { , {b, c}, X} and (1,2)*- C(X) = (1,2)*-S C(X) = { , {b}, {c}, {b, c}, X}. Here, A = {b} is (1,2)*--closed as well as (1,2)*-semi-closed in X but it is not (1,2)*-g-closed in X.

Properties of (1,2)*-g-Closed Sets

In this section, we discuss some basic properties of (1,2)*-g-closed sets.

Definition 1.4.1

The intersection of all (1,2)*-gs-open subsets of X containing A is called the (1,2)*-gs-kernel of A and denoted by (1,2)*-gs-ker(A).

Lemma 1.4.2

A subset A of X is (1,2)*-g-closed if and only if $_{1,2}$-cl(A) (1,2)*-gs-ker(A).

Proof

Suppose that A is (1,2)*-g-closed. Then $_{1,2}$-cl(A) U whenever A U and U is (1,2)*-gs-open. Let x $_{1,2}$-cl(A). If x (1,2)*-gs-ker(A), then there is a (1,2)*-gs-open set U containing A such that x U. Since U is a (1,2)*-gs-open set containing A, we have x $_{1,2}$-cl(A) and this is a contradiction.

Conversely, let $_{1,2}$-cl(A) $\subseteq$ (1,2)*-gs-ker(A). If U is any (1,2)*-gs-open set containing A, then $_{1,2}$-cl(A) $\subseteq$ (1,2)*-gs-ker(A) $\subseteq$ U. Therefore, A is (1,2)*-g-closed.

Remark 1.4.3

If A and B are (1,2)*-g-closed sets in X, then the following examples support that A $\cup$ B(A $\cap$ B) need not be (1,2)*-g-closed in X.

Example 1.4.4

i) Let X = {a, b, c}, $_1$ = {$\emptyset$, X, {a, b}} and $_2$ = {$\emptyset$, X, {c}, {a, c}, {b, c}}. Then (1,2)*-GC(X) = {$\emptyset$, {a}, {b}, {c}, {a, b}, X}. Clearly {b} and {c} are (1,2)*-g-closed sets but {b, c} is not (1,2)*-g-closed set.

ii) Let X = {a, b, c}, $_1$ = {$\emptyset$, X, {a, c}} and $_2$ = {$\emptyset$, X, {a}, {b}, {a, b}, {b, c}}. Then (1,2)*-GC(X) = {$\emptyset$, {a}, {b}, {a, b}, {a, c}, {b, c}, X}. Clearly {a, c} and {b, c} are (1,2)*-g-closed sets but {c} is not (1,2)*-g-closed set.

Proposition 1.4.5

If a set A is (1,2)*-g-closed in X, then $_{1,2}$-cl(A) $-$ A contains no nonempty $_{1,2}$-closed set in X.

Proof

Suppose that A is (1,2)*-g-closed. Let F be a $_{1,2}$-closed subset of $_{1,2}$-cl(A) $-$ A. Then A $\subseteq$ F^c. But A is (1,2)*-g-closed, therefore $_{1,2}$-cl(A) $\subseteq$ F^c. Consequently, F $\subseteq$ ($_{1,2}$-cl(A))^c. We already have F $\subseteq$ $_{1,2}$-cl(A). Thus F $\subseteq$ $_{1,2}$-cl(A) $\cap$ ($_{1,2}$-cl(A))^c and F is empty. The converse of Proposition 1.4.5 need not be true as seen from the following example.

Example 1.4.6

Let X = {a, b, c} with $_1$ = {$\emptyset$, {a}, X} and $_2$ = {$\emptyset$, X}. Then (1,2)*-GC(X) = {$\emptyset$, {b, c}, X}. If A = {b}, then $_{1,2}$-cl(A) $-$ A = {c} does not contain any nonempty $_{1,2}$-closed set. But A is not (1,2)*-g-closed in X.

Conclusion

Through the above findings, this paper has attempted to compare (1,2)*-g-closed sets with the other closed sets in bitopological spaces. An attempt of this paper is to state that the several definitions and results that shown in this paper, will result in obtaining several characterizations and enable to study various properties as well.

References

1. Abd El-Monsef, M. E., El-Deeb, S. N. and Mahmoud, R. A.: ß-open sets and ß-continuous mappings, Bull. Fac. Sci. Assiut Univ., 12 (1983), 77-90.

2. Andrijevic, D.: Semi-preopen sets, Mat. Vesnik., 38 (1986), 24-32.

3. Arya, S. P. and Nour, T.: Characterizations of s-normal spaces, Indian J. Pure Appl. Math., 21(8) (1990), 717-719.

4. Bhattacharya, P. and Lahiri, B. K.: Semi-generalized closed sets in topology, Indian J. Math., 29(3) (1987), 375-382.

5. Cao, J., Ganster, M. and Reilly, I. L.: Submaximality, extremal disconnectedness and generalized closed sets, Houston J. Math., 24 (1998), 681-688.

6. Cao, J., Ganster, M. and Reilly, I. L.: On sg-closed sets and gα-closed sets, Mem. Fac. Sci. Kochi Univ. Ser. A. Math., 20 (1999), 1-5.

7. Dontchev, J. and Ganster, M.: On δ-generalized closed sets and $T_{3/4}$-spaces, Mem. Fac. Sci. Kochi Univ. Ser. A. Math., 17 (1996), 15-31.

8. Kong, T., Kopperman, R. and Meyer, P.: A topological approach to digital topology, Amer. Math. Monthly., 98 (1991), 901-917.

9. Levine, N.: Generalized closed sets in topology, Rend. Circ. Math. Palermo, 19(2) (1970), 89-96.

10. Levine, N.: Semi-open sets and semi-continuity in topological spaces, Amer. Math. Monthly, 70 (1963), 36-41.

11. Mashhour, A. S., Abd El-Monsef, M. E. and El-Deeb, S. N.: On precontinuous and weak pre continuous mappings, Proc. Math. and Phys. Soc. Egypt, 53 (1982), 47-53.

12. Njastad, O.: On some classes of nearly open sets, Pacific J. Math., 15 (1965), 961-970.

13. Rajamani, M. and Viswanathan, K.: On αgs-closed sets in topological spaces, Acta Ciencia Indica, XXXM (3) (2004), 21-25.

14. Ravi, O., Thivagar, M. L. and Hatir, E.: Decomposition of (1,2)*- continuity and (1,2)*-α -continuity, Miskolc Mathematical Notes., 10(2) (2009), 163-171.

15. Ravi, O. and Lellis Thivagar, M.: A bitopological (1,2)*-semi- generalized continuous maps, Bull. Malays. Math. Sci. Soc., (2), 29(1) (2006), 79-88.

16. Ravi, O. and Lellis Thivagar, M.: On stronger forms of (1,2)*-quotient mappings in bitopological spaces, Internat. J. Math. Game Theory and Algebra., 14(6) (2004), 481-492.

17. Ravi, O. and Thivagar, M. L.: Remarks on λ-irresolute functions via (1,2)*-sets, Advances in App. Math. Analysis, 5(1) (2010), 1-15.

18. Ravi, O., Pious Missier, S. and Salai Parkunan, T.: On bitopological (1,2)*-generalized homeomorphisms, Int J. Contemp. Math. Sciences., 5(11) (2010), 543-557.

19. Ravi, O., Thivagar, M. L. and Jinjinli.: Remarks on extensions of (1,2)*-g-closed maps, Archimedes J. Math., 1(2) (2011), 177-187.

20. Sheik John, M.: A study on generalizations of closed sets and continuous maps in topological and bitopological spaces, Ph.D Thesis, Bharathiar University, Coimbatore, September 2002.

EFFECT OF TREADMILL TRAINING ON SELECTED BIOCHEMICAL AND HAEMOTOLOGICAL VARIABLES OF COLLEGE PLAYERS

Dr.G. Raghavan
Director of Physical Education,
Mannar Thirumalai Naicker College, Madurai

Abstract

The purpose of the study was to find out the effect of treadmill training on selected biochemical variables such as HDL-Cholesterol, Platelets Count and Blood clotting time of college players. Forty female subjects for this study were selected from Dr. Sivanthi Aditanar College of Physical Education and Govindammal Aditanar College for Women, Tiruchendur randomly and divided into two groups as experimental and control groups. Blood samples were taken from the each subject before and after the treadmill training and tested in the biochemistry lab at Tirunelveli. The collected data was statistically analysed by using analysis of covariance (ANCOVA). It was found that there was significant difference on HDL-Cholesterol and blood clotting time of experimental group when compared to the control group. However, there was no significant difference on Platelets count.

Introduction

Training is a programme of exercise designed to improve the skills and increase the energy capacity of an athlete for a particular event. In sports, the word 'training' is generally understood to be a synonymous of doing physical exercises. In a narrow sense training is doing physical exercises for the improvement of performance or general fitness. Training improves the functioning of the circulatory, respiratory and muscular systems. Practice is largely aimed at improving control of muscular activity by the nervous system. Different training methods have been commonly used to improve physical fitness and its related standards of performance of the players. There are several types of training used for developing Physical fitness. They are as interval training, fartlek training, weight training, circuit training, treadmill training, bicycle ergometer training etcetera. Among the above, weight training and treadmill training are used in the fitness center to develop fitness according to their level and it is very simplest way of developing fitness in the fitness center. Hence, an attempt was made to find out the effect of treadmill training on the physiology of Players. So, the purpose of the present study was to find out the effect of treadmill training on biochemical and haemotological variables of college players.

Methodology

To achieve the purpose of the study, forty female subjects were selected from Dr. Sivanthi Aditanar College of Physical Education and Govindammal Aditanar College for Women, Tiruchendur randomly and divided into two equal groups as experimental and control groups. Group I underwent treadmill training for four days per week for

six weeks and Group II acted as control group who did not participate in any special training. The age of the subjects ranged from 18 to 25 years. The intensity of the training was fixed depending upon the individual performance of the subjects. There were three repetitions and two sets. Each repetition was lasting for 5 minutes for the first & second weeks, 7 minutes for third & fourth weeks and 9 minutes for fifth and sixth weeks. The rest interval in between repetitions was two minutes and in between sets was five minutes.

Table I Intensity

	First & Second weeks	Third & Fourth weeks	Fifth & Sixth weeks
Intensity	55%	60%	65%

Blood samples were taken from the each subject before and after the treadmill training and tested (table II) in the biochemistry lab at Tirunelveli. The collected data was statistically analysed by using analysis of covariance (ANCOVA).

Table II Selection of Test

S.No	Criterion Variables	Tests	Units of Measurement
1	HDL-Cholesterol	One Step Method	Mg/dl
2	Platelets Count	Blood Test	Lakhs Cells/Cu.mm
3	Blood Clotting Time	Blood Test	In minutes

Analysis of Data

The collected data was statistically analysed by using analysis of covariance (ANCOVA) and they were presented in table II.

Table II Analysis of Co variance on Criterion Variables of Experimental and Control Groups

Criterion Variables	Adjusted post tests means		Source of Variance	df	Sum of Squares	Mean Squares	F-Value
	Experimental Group	Control Group					
HDl – Cholesterol	62.02	56.40	Between Within	1 38	284.46 213.99	284.46 12.59	22.59*
Plateletes Count	1.85	1.11	Between Within	1 38	0.14 1.15	0.14 0.06	2.33
Blood Clotting Time	2.12	2.81	Between Within	1 38	1.33 3.52	1.33 0.20	6.65*

*significant at .05 level of confidence
(Table value required for significance at .05 level with df 1 and 38 is 4.08)

From the Table II, the obtained F-ratio of HDL-Cholesterol and Blood clotting time for adjusted post test mean were more than the table value of 4.08 for df 1 and 38 required for significance at .05 level of confidence. The results of the study indicate that there is significant difference among the adjusted post test means of experimental

group and control group on the improvement of HDL-Cholesterol and Blood clotting time. And also from the table II, the obtained F-ratio of platelets count for adjusted post test mean were less than the table value of 4.08 for df 1 and 38 required for significance at .05 level of confidence. The results of the study indicate that there is no significant difference among the adjusted post test means of experimental group and control group on the improvement of platelets count.

Conclusions

From the analysis of the data, the following conclusions were drawn.

1. The experimental group namely treadmill group have achieved significant improvement on HDL-Cholesterol and Blood clotting time when compared to the control group.
2. Significant differences were found among experimental and control groups towards improving the selected criterion variables HDL-Cholesterol and Blood clotting time.
3. The experimental group namely treadmill group have not achieved significant improvement on platelets when compared to the control group.

References

1. Bompa, O. Tudor, Theory and Methodology of Training, Champaign, Illinois: Human Kinetics, 1999.
2. Devries, A. Herbert, Housh, J. Terry, Physiology of Exercises, Bench mark, USA: WMC Brown, 1994.
3. Dick, W. Frank, Sports Training Principles, London: A & C Black publishers, 2001
4. George Dintiman, Bobward and Tom Tellez, Sports Speed, USA: Human Kinetics, 1998.
5. Kamlesh, M., Foundations of Physical Education, New Delhi: Metropolitan Book Co. Pvt. Ltd, 1994.
6. Martine E. David and Coe, N. Peter, Better Training for Distance Runners, USA: Human Kinetics, 1997.
7. Robergs A. Robert, Roberts O. Scott, Exercises Physiology, New York: Mosby Publication, 1997.
8. Shaver, G. Larry, Essential of Exercises Physiology, U.S.A Macmillan Publication, 1981.
9. Uppal, A.K., Principles of Sports Training, New Delhi: Friends Publications, 2001.
10. Wilf Paish, The Complete Manual of Sports Science, London: A & C Black Publication, 1998.

THE EFFECT OF CHEMICAL COMPOSITION OF MOLTEN FLUX IN THE STRUCTURAL EVOLUTION OF CEVO₄

M.Gowria, G.Sathyaa & L.JohnBerchmans
Electropyrometallurgy Division,
CSIR-CECRI, Karaikudi, Tamil Nadu, India

R.Sangeetha, S.Francis & A.Lakshmi
Department of Physics,
Mannar Thirumalai Naicker College, Madurai

Abstract

In the present study, the structural evolution of CeVO₄ with respect to chemical composition of molten flux has been explored. The experiments were carried out in LiCl, NaCl, KCl, LiCl-KCl and NaCl-KCl molten flux medium at 630°C, 820°C, 790°C, 470°C and 747 °C respectively. The phase purity and morphology of as-synthesized CeVO₄ was examined by XRD, SEM and TEM analysis. The optical properties of the CeVO₄ were characterized by UV-Vis, Photoluminescence and FTIR spectroscopy. The effect of molten flux type on the formation of CeVO₄ was explained based on the difference in the solubility of reactants and the melting point of fluxes.

1. Introduction

Lanthanide orthovanadates are attracting great attention because of their prospective applications in many fields such as catalysis[1–3], laser host materials[4], phosphors[5–7], electrochromic devices[8–11], components of solid oxide fuel cells[12], solid membrane electrode[13] etc. Hence, there arises a need to prepare this compound via an efficient method. The conventional solid state synthesis requires long thermal treatment with intermediate cooling and grinding at high temperature. The product obtained from solid state technique leads to large crystal size , inhomogeneity in chemical composition and low specific surface area[14]. Several methods have been used for the synthesis of lanthanide orthovanadates like solid state reaction[15], hydrothermal synthesis[16–18], sol-gel method[10], microwave processing[19], sonochemical assistant method[20] and ultrasound technique[21]. Molten salt synthesis is one of the versatile routes for synthesizing simple or mixed oxides[22]. The compound obtained by molten salt synthesis have several unique characteristics compared to those obtained by other methods [23]. Molten salts provide a liquid medium for the oxide formation which increases the mass transport of the reactants, degree of homogeneity and decrease the synthesis temperature and time[24–26]. A variety of advanced oxide materials have been recently prepared using different fluxes such as NaCl-KCl[27], LiCl-KCl[28], LiNO₃-LiOH-Li₂O₂[29], KNO₃-KOH[30],

etc. To the best of our knowledge, none has attempted to prepare cerium vanadate compound by molten salt/molten flux technique. Hence, we make an attempt to prepare a pure phase of cerium vanadate using different molten salts and investigate the role of each salt on the structural evolution of $CeVO_4$.

2. Experimental

Stoichiometric proportions of ceric oxide and vanadium pentoxide were mixed thoroughly and ground using mortar and pestle. The molar ratio of reactants and the flux were uniformly mixed together and placed in a high density alumina crucible and fired at a temperature slightly higher than the corresponding melting temperature of the flux. The reaction temperature for LiCl, NaCl, KCl, LiCl-KCl and NaCl-KCl are 630°C, 820°C, 790°C, 470°C and 747 °C respectively. At this temperature, the salt medium forms a molten flux, and the precursor oxides disperse, dissociate, rearrange and diffuse rapidly throughout the melt forming the final product. Finally, the resultant product was washed with dilute hydrochloric acid (1%) followed by hot distilled water. The process was repeated for several times in order to remove the flux from the product. Then the residue was dried at 100 °C for 1 hour in a hot air oven to remove the surface moisture. Finally, a free flowing fine crystalline powder was obtained.

The possible chemical reaction is presented below

$$2CeO_2 + V_2O_5 \quad\quad 2CeVO_4 + 1/2O_2$$

3. Results and discussion

3.1. X-Ray Diffraction

The X-ray diffraction pattern as shown in Fig. 1a displays the chemical composition and crystallinity of the as-synthesized cerium vanadate particles. The XRD pattern are indexed to the tetragonal phase with lattice constants a = b =7.4004 Å and c = 6.4972Å (JCPDS No. 082-1969). The pre-dominant peaks appeared at 2 values of 24°, 32.3° and 47.8° represent the (200), (112) and (312) crystal planes which are characteristic of cerium vanadate compound. It is well agreed with the data reported by Hong Deng et al. of $CeVO_4$ prepared by reverse microemulsion reaction[26]. From the Fig. 1a, it is clear that all the molten flux yielded high purity $CeVO_4$ but the product obtained in LiCl-KCl is very much crystalline compared to others. On juxtaposing the $CeVO_4$ obtained under LiCl and LiCl-KCl, the latter yielded lesser average crystalline size when calculated by Debye-Scherrer equation. Similarly, the average crystalline size of as synthesized sample obtained in NaCl-KCl eutectic system was much lesser than those obtained in individual molten salt melts namely NaCl and KCl as higher

temperature accelerates the Ostwald ripening leading to the formation of larger particles.

3.2. Scanning Electron Microscopy

Fig. 1b shows the SEM micrographs of cerium vanadate obtained under different fluxes. The morphology of the product varies with the type of molten flux used. The product shape is pyramid with tetragonal prism in all the molten salt systems except LiCl-KCl where $CeVO_4$ product is highly homogenous and spherical in shape in the size range of 25-45 nm. In other molten flux systems, the particle size is inhomogenous due to grain growth characteristic of Ostwald ripening influenced by interface reaction[31]. Fig. 1a(iv) shows $CeVO_4$ produced in NaCl-KCl which indicates the nucleation of new particle at existing particle edges due to high degree of supersaturation.The grain growth depends on solubility of reactants in molten flux and temperature dependent Ostwald ripening[32,33]. Lower the solubility of precursors in molten flux, lower will be the particle size[24].

3.3. Transmission Electron Microscopy

Fig. 2a shows TEM image of $CeVO_4$ prepared in molten KCl which unveils small crystallites growing along existing large particle.The corresponding SAED pattern indicates (103) and (211) planes measured in (351) zone axis.Fig. 2b shows the TEM image of spherical nanoparticlesof $CeVO_4$ prepared using LiCl-KCl and its SAED pattern displays (200) and (312) crystal planes. TEM image shown in Fig. 3c displays flakes of $CeVO_4$ particles arranged one over the other which was prepared under molten NaCl ambience. Fig. 3e shows the nanorods of $CeVO_4$ prepared in NaCl-KCl since the crystal growth proceeds along one particular direction.

3.4. Optical properties

Fig. 3a shows the UV-Vis spectra and corresponding Tauc plot of as synthesized $CeVO_4$. From the Tauc plot, the $CeVO_4$ prepared by molten salt synthesis has a direct bandgap of 3.5eV. The room temperature photoluminescence spectrum of $CeVO_4$ prepared in different molten melts is shown in Fig. 3b. The spectrum displays that $CeVO_4$ samples show an intensive visible emission located in the orange region with its maximum intensity peak at 600nm when excited by 440nm. The emission band is due to the electronic transition of Ce^{3+} ion from the lowest excited states arising from $5d^1$ to $4f^1$ ground state [19].

Fig.3c presents the five different FTIR spectrum of cerium vanadate synthesized under different molten melts recorded in the wavenumber range of 400 to 4000 cm^{-1}. The broad band at around 500 $cm^{-1}$is attributed to Ce-O band[34]. The spectra exhibits

sharp broad bands around 765 cm^{-1} which is assigned to the stretching vibration of V-O respectively[19]. The spectra also displays hollow bands at higher wavelengths side beyond 1600 to 4000 cm^{-1} responsible for O-H bending and stretching vibrations of water molecules surrounding the surface. Since the compound is hygroscopic, the existence of peaks responsible for water occurs in these regions.

4. Conclusion

Cerium vanadate was successfully synthesized by molten salt technique and the effect of different molten salt on the product formation was investigated. LiCl-KCl is highly recommended for the product formation because it yielded high crystalline and homogenous nanoparticles compared to others. PL spectra of CeVO$_4$ indicated the optically favorable nature of these nanoparticles.

Acknowledgements

Supplementary Information

XRD analysis was carried out using X-ray powder diffractometer (Philips 8030X-ray Diffractor) with CuKα radiation (λ=1.5406 Å). Phase identification was performed using panalyticalx'perthighscore plus and the XRD patterns were compared with the standard JCPDS files using the search/match program. The surface morphology was analyzed by using scanning electron microscope (JEOL-JSM-3.5 CF-JAPAN).The nano-size of the powder was assessed by transmission electron microscope. TEM images were recorded using a JEOL-3010 transmission electron microscope using 300 kV accelerating voltage with a 400-mesh ultra thin carbon type A copper grid. FT-IR analysis was performed with a Perklin Elmer UK paragon - 500 spectroscope in the mid infrared region (4000–400 cm^{-1}). For each sample, approximately 2 mg of sample was dispersed in 300 mg of KBr powder and pressed into a pellet. The pellets were used for the spectral analysis. The UV-Vis analysis was conducted using VARIAN Cary 5000 scan spectrophotometer.The photoluminescence study was executed using VARIAN Cary Eclipse Fluorescence spectrophotometer.
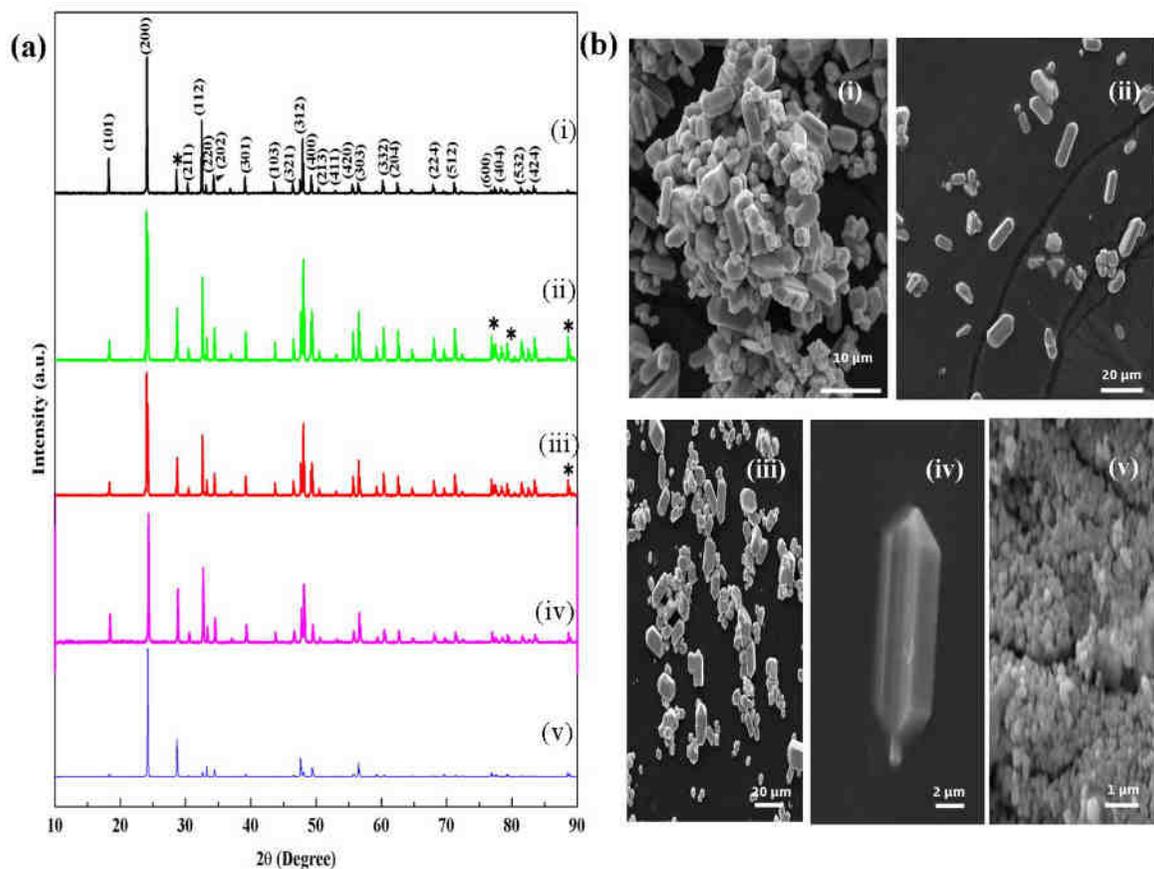
Fig. 1.(a) XRD pattern and (b) SEM images of prepared materials: (i) the sample prepared via MSS in KCl at 790˚C, (ii) the sample prepared via MSS in NaCl at 820˚C, (iii) the sample prepared via MSS in LiCl at 630˚C,(iv) the sample prepared via MSS in NaCl-KCl at 747˚C, (v) the sample prepared via MSS in LiCl-KCl at 470˚C,* in XRD pattern represents a impurity phase of CeO_2;
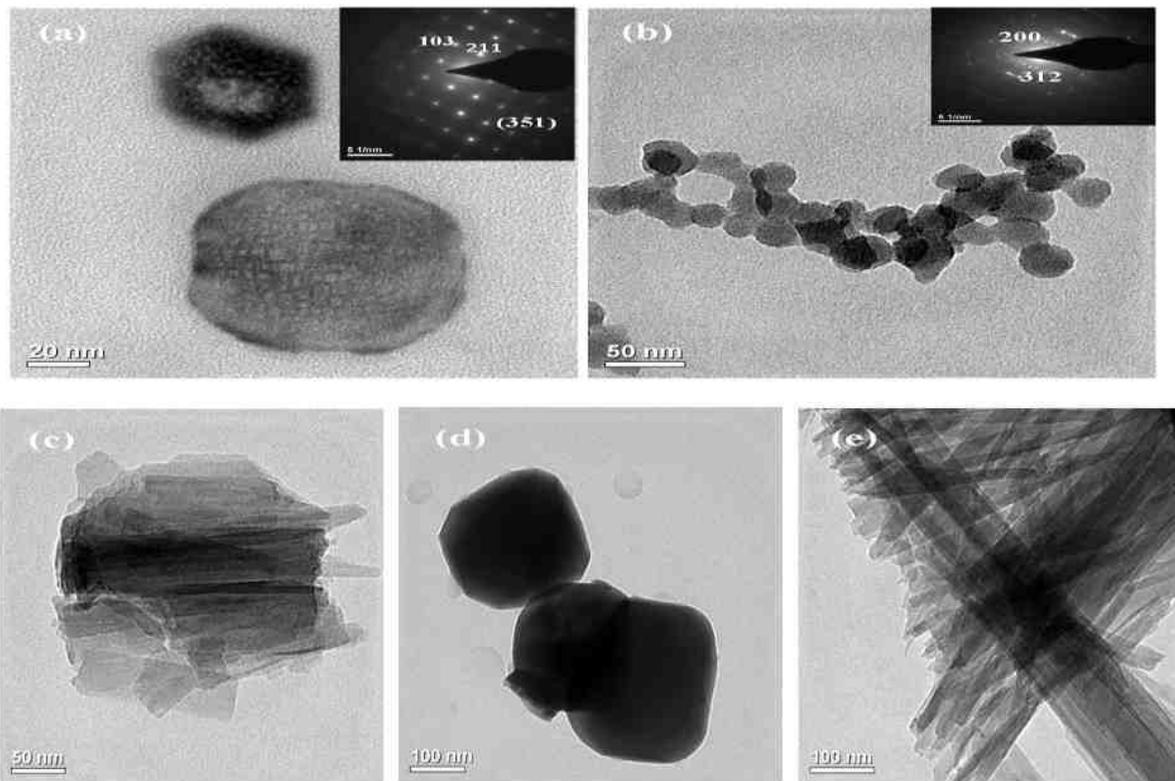
Fig. 2.TEM image of CeVO$_4$ particles: (a) sample prepared in KCl melt; (b) sample prepared in LiCl-KCl eutectic melt; (c) sample prepared in NaCl melt; (d) sample prepared in LiCl melt; (e) sample prepared in NaCl-KCl eutectic melt.
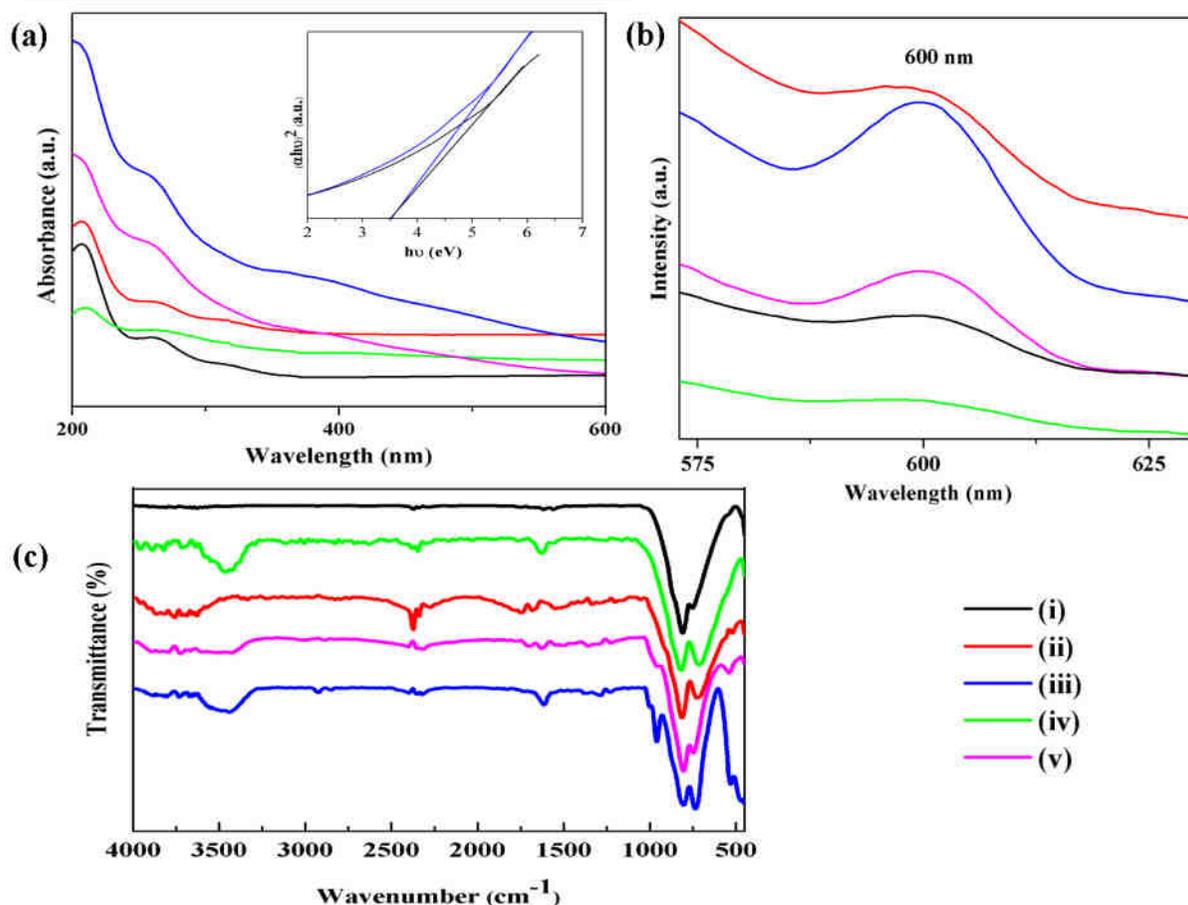
Fig. 3. (a) UV-Vis absorption spectra, (b) photoluminescence spectra and (c) FTIR spectra of CeVO$_4$ compound prepared under different molten flux: (i) KCl; (ii) NaCl; (iii) LiCl; (iv) NaCl-KCl; (v) LiCl-KCl respectively.

References

1. J. Liu, W. Chen, X. Liu, K. Zhou, Y. Li, Au/LaVO$_4$ Nanocomposite: Preparation, characterization, and catalytic activity for CO oxidation, Nano Res. 1 (2008) 46–55. doi:10.1007/s12274-008-8002-y.

2. Z.M. Fang, Q. Hong, Z.H. Zhou, S.J. Dai, W.Z. Weng, H.L. Wan, Oxidative dehydrogenation of propane over a series of low-temperature rare earth orthovanadate catalysts prepared by the nitrate method, Catal. Letters. 61 (1999) 39–44.

3. M. Martinezhuerta, Nature of the vanadia-ceria interface in V^{5+}/CeO$_2$ catalysts and its relevance for the solid-state reaction toward CeVO$_4$ and catalytic properties, J. Catal. 225 (2004) 240–248. doi:10.1016/j.jcat.2004.04.005.

4. R. A. Fields, M. Birnbaum, C.L. Fincher, Highly efficient Nd:YVO$_4$ diode-laser end-

pumped laser, Appl. Phys. Lett. 51 (1987) 1885. doi:10.1063/1.98500.

5. A. Huignard, T. Gacoin, J.-P. Boilot, Synthesis and luminescence properties of colloidal YVO_4: Eu phosphors, Chem. Mater. 12 (2000) 1090–1094. doi:10.1021/cm990722t.

6. J. Liu, Y.D. Li, Synthesis and Self-Assembly of Luminescent Ln^{3+}-Doped $LaVO_4$ Uniform Nanocrystals, Adv. Mater. 19 (2007) 1118–1122. doi:10.1002/adma.200600336.

7. J. Liu, Y. Li, General synthesis of colloidal rare earth orthovanadate nanocrystals, J. Mater. Chem. 17 (2007) 1797. doi:10.1039/b617959b.

8. B. Orel, A. Šurca Vuk, U. Opara Krašovec, G. Dražič, Electrochromic and structural investigation of $InVO_4$ and some other vanadia-based oxide films, Electrochim. Acta. 46 (2001) 2059–2068. doi:10.1016/S0013-4686(01)00406-6.

9. U. Calabria, U.I. Cosenza, R. Cosenza, Spectroscopic Characterization of the Mixed Films TiO_2-V_2O_5 , Used as Counter Electrodes in Electrochromic Devices and in Liquid Crystal Cells, 8 (2002) 244–251.

10. U.O. Krasovec, B. Orel, A. Surca, N. Bukovec, R. Reisfeld, Structural and spectroelectrochemical investigations of tetragonal $CeVO_4$ and Ce/V-oxide sol-gel derived ion-storage films, Solid State Ionics. 118 (1999) 195–214. doi:10.1016/S0167-2738(98)00456-1.

11. L. Chen, Hydrothermal synthesis and ethanol sensing properties of $CeVO_4$ and $CeVO_4$–CeO_2 powders, Mater. Lett. 60 (2006) 1859–1862. doi:10.1016/j.matlet.2005.12.037.

12. L. Adijanto, V. Balaji Padmanabhan, R. Küngas, R.J. Gorte, J.M. Vohs, Transition metal-doped rare earth vanadates: a regenerable catalytic material for SOFC anodes, J. Mater. Chem. 22 (2012) 11396. doi:10.1039/c2jm31774e.

13. A.K. Jairz, L.P. Singh, U. Khuranu, A New Cerium (IV) Vanadate-Based Solid Membrane Electrode for, 667 (1997) 1360–1364.

14. L. Vradman, J. Zana, A. Kirschner, M. Herskowitz, Synthesis of $LaMnO_3$ in molten chlorides: effect of preparation conditions, Phys. Chem. Chem. Phys. 15 (2013) 10914. doi:10.1039/c3cp50713k.

15. A. Watanabe, Highly Conductive Oxides, $CeVO_4$, $Ce_{1-x}M_xVO_{4-0.5x}$(M=Ca, Sr, Pb) and $Ce_{1-y}Bi_yVO_4$, with Zircon-Type Structure Prepared by Solid-State Reaction in Air, J. Solid State Chem. 153 (2000) 174–179. doi:10.1006/jssc.2000.8773.

16. F. Liu, X. Shao, Y. Yin, L. Zhao, Z. Shao, X. Liu, et al., Shape controlled synthesis and tribological properties of $CeVO_4$ nanoparticles aslubricating additive, J. Rare Earths. 29 (2011) 688–691. doi:10.1016/S1002-0721(10)60523-6.

17. F. Luo, C.J. Jia, W. Song, L.P. You, C.H. Yan, Chelating ligand-mediated crystal growth of cerium orthovanadate, Cryst. Growth Des. 5 (2005) 137–142.

doi:10.1021/cg049940b.

18. Z. Xu, C. Li, Z. Hou, C. Peng, J. Lin, Morphological control and luminescence properties of lanthanide orthovanadate $LnVO_4$ (Ln = La to Lu) nano-/microcrystals viahydrothermal process, CrystEngComm. 13 (2011) 474–482. doi:10.1039/C0CE00161A.

19. N. Ekthammathat, T. Thongtem, A. Phuruangrat, S. Thongtem, Synthesis and characterization of $CeVO_4$ by microwave radiation method and its photocatalytic activity, J. Nanomater. (2013). doi:10.1155/2013/434197.

20. B. Xie, G. Lu, Q. Dai, Y. Wang, Y. Guo, Y. Guo, Synthesis of $CeVO_4$ Crystals with Different Sizes and Shapes, J. Clust. Sci. 22 (2011) 555–561. doi:10.1007/s10876-011-0396-0.

21. Y. Zheng, Q. Yang, Synthesis and Characterization of Nanoparticulate $CeVO_4$ by Ultrasound Method and its Photocatalytic Activity, (2015) 229–232.

22. G.E. Company, The Molten Salt Synthesis of Single Magnetic Domain $BaFe_{12}O_{19}$ and $SrFe_{12}O_{19}$ Crystals, J. Solid State Chem. 7 (1973) 339–347.

23. K.H. Yoon, Y.S. Cho, D.H. Kang, Molten salt synthesis of lead-based relaxors, J. Mater. Sci. 33 (1998) 2977–2984. doi:10.1023/A:1004310931643.

24. T. Kimura, Molten Salt Synthesis of Ceramic Powders, Adv. Ceram. - Synth. Charact. Process. Specif. Appl. (2011) 75–100. doi:10.5772/20472.

25. J. Sun, G. Chen, Y. Li, R. Jin, Q. Wang, J. Pei, Novel (Na, K)TaO_3 single crystal nanocubes: Molten salt synthesis, invariable energy level doping and excellent photocatalytic performance, Energy Environ. Sci. 4 (2011) 4052. doi:10.1039/c1ee01259b.

26. H. Deng, S. Yang, S. Xiao, H.M. Gong, Q.Q. Wang, Controlled synthesis and upconverted avalanche luminescence of cerium(III) and neodymium(III) orthovanadate nanocrystals with high uniformity of size and shape, J. Am. Chem. Soc. 130 (2008) 2032–2040. doi:10.1021/ja0778141.

27. M.K. Ekmekçi, M. Erdem, A.S. Başak, Molten salt synthesis, visible and near-IR region spectral properties of europium or neodymium doped $CoNb_2O_6$ columbite niobate, Dalt. Trans. 44 (2015) 5379–5385. doi:10.1039/C4DT03001J.

28. Y. Bai, F. Wang, F. Wu, C. Wu, L. Bao, Influence of composite LiCl–KCl molten salt on microstructure and electrochemical performance of spinel $Li_4Ti_5O_{12}$, Electrochim. Acta. 54 (2008) 322–327. doi:10.1016/j.electacta.2008.07.076.

29. M.M. Rahman, J.-Z. Wang, M.F. Hassan, S. Chou, D. Wexler, H.-K. Liu, Basic molten salt process—A new route for synthesis of nanocrystalline $Li_4Ti_5O_{12}$–TiO_2 anode material for Li-ion batteries using eutectic mixture of $LiNO_3$–$LiOH$–Li_2O_2, J. Power Sources. 195 (2010) 4297–4303. doi:10.1016/j.jpowsour.2010.01.073.

30. A. Gorokhovsky, J.. Escalante-García, T. Sánchez-Monjarás, C.. Gutiérrez-

Chavarría, Synthesis of potassium polytitanate precursors by treatment of TiO2 with molten mixtures of KNO_3 and KOH, J. Eur. Ceram. Soc. 24 (2004) 3541–3546. doi:10.1016/j.jeurceramsoc.2003.12.006.

31. W.E. Lee, Ceramic processing and sintering, Int. Mater. Rev. 41 (1996) 36–37. doi:10.1179/095066096790151286.

32. S.B. Simonsen, I. Chorkendorff, S. Dahl, M. Skoglundh, J. Sehested, S. Helveg, Ostwald ripening in a Pt/SiO2 model catalyst studied by in situ TEM, J. Catal. 281 (2011) 147–155. doi:10.1016/j.jcat.2011.04.011.

33. T. Kimura, T. Yamaguchi, R.E. Newnham, Phase and Morphology of $Pbnb_2o_6$ Obtained by Molten Salt Synthesis, Part. Sci. Technol. 1 (1983) 357–364. doi:10.1080/02726358308906379.

34. B. Sabu, T. Varghese, Structural characterization and optical studies of CeO_2 nanoparticles synthesized by chemical precipitation, 53 (2015) 596–603.

PREPARATION OF CERIUM TUNGSTATE BY MOLTEN SALT TECHNIQUE

M.Gowri
Chemical and Electrochemical Engineering, CSIR-CECRI, Karaikudi

G.Sathya
Electropyrometallurgy Division, CSIR-CECRI,
Karaikudi, Tamil Nadu, India

S. Francis
Department of Physics, Mannar Thirumalai Naicker College, Madurai

S.S.Jayabalakrishnan
Department of Physics, Mannar Thirumalai Naicker College, Madurai

P.Kavitha
CDepartment of Physics,
Mannar Thirumalai Naicker College, Madurai

L.John Berchmans
Electropyrometallurgy Division,
CSIR-CECRI, Karaikudi, Tamil Nadu, India

Abstract

The present investigation deals with the synthesize of Cerium Tungstate $Ce_2(WO_4)_3$ (CWO) by molten salt technique at 800 °C. Nano crystalline CWO powders have been prepared by molten salt technique using cerium oxide (CeO_2) and tungsten oxide (WO_3) as precursors. A eutectic mixture of NaCl and KCl was used as the flux. The samples were characterized by X-ray Diffraction (XRD), FT-IR and UV-visible spectroscopy. In order to identify the thermal decomposition and dissociation reactions, differential thermal analysis (DTA) and thermo gravimetric analysis (TGA) were performed. The elemental analysis of the powders was assessed using Energy Dispersive X-ray analysis (EDS) technique. The morphological features of the powders were examined by Field Emission Scanning Electron Microscopy (FESEM). The luminescence transition shown by CWO was also studied. The XRD pattern exhibits sharp crystalline peaks ascertaining the formation of single phase CWO crystal. The average crystalline size of the powders has been determined using Debye Scherrer equation. FT-IR spectrum reveals the structure co-ordination of the CWO powder. The field emission scanning electron micrographs exhibit the crystals with agglomerated particle morphology.

1. Introduction

The rare earth metals and their compounds exhibit interesting physico-chemical properties due to their electronic configuration of unfilled 4f shell with the band states of the solids[1]. Cerium Tungsten mixed oxide compounds are of interest because of their fascinating optical and catalytic properties, for example in isomerisation of hexane, dehydrogenation of alkanes used in rechargeable solid oxygen reservoirs for clean hydrogen oxidation, or in inorganic ion exchangers. Cerium based intermetallics show

exceptional behavior like Kondo effect[2-4], valency instability and heavy electron behavior[5]. There has been a great interest on the preparation and understanding of the physico-chemical properties of nano structured cerium based compounds due to their vast applications in the area of nuclear technology[6], pharmaceutical industry[7-10], paint technology[11], electronics, humidity sensors and catalysis[12,13]. Nano structured metal tungstates have been synthesized by a variety of methods and their structural properties have been studied[14-17].

Cerium molybdo tungstate prepared by chemical co-precipitation method and its electrical and optical properties has been evaluated[18]. $Y_2(WO)_3$ has been prepared by ethylenediamine tetra acetic acid[19] assisted technique in the presence of benzenesulfonate[20]. Ce-W mixed oxide catalyst has been synthesized by homogenous precipitation method and its catalytic reduction of NO_x with NH_3 has been reported[21]. Cerium tungstate powder was chemically synthesized and its usage as absorbent material for the decontamination of cobalt and europium ions from radioactive waste solutions under stimulated conditions has been evaluated[22].

Even though many methods have been narrated on the synthesis of cerium based tungstate compounds, none has attempted to prepare this compound by molten salt technique. Hence, we made an attempt to prepare this compound by a single step molten salt synthesis route.

2. Experimental Details

Ceric oxide (CeO_2) (99.95 % purity, Loba Chemie), and tungsten (IV) oxide $(WO)_3$ (99% purity, SDFCL) were used as the starting materials for the preparation of cerium tungstate powders. Stoichiometric proportion of the reactants was mixed thoroughly and ground using mortar and pestle. An equimolar mixture of sodium chloride and potassium chloride salts were used as the flux. The reactants and the flux uniformly mixed together were placed in a high density alumina crucible and fired at 850 °C for 8 hour. At this temperature, the salt medium forms a molten flux, and the precursor oxides disperse, dissociate, rearrange and diffuse rapidly throughout the melt forming the final product. Finally, the resultant product was washed with dilute hydrochloric acid (1%) followed by hot distilled water. The process was repeated for several times in order to remove the flux from the product. Then the residue was dried at 50 °C for 1 hour in a hot air oven to remove the surface moisture. The above experimental details are represented schematically in Figure 1. The possible chemical reaction at 800 °C is presented below.

$$2CeO_2 + 3WO_3 \longrightarrow Ce_2(WO_4)_3 + 1/2O_2$$

Finally, a free flowing fine crystalline white powder was obtained.

Differential thermal analysis (DTA) and thermo gravimetric analysis (TGA) of the precursor powder were carried out using STA 1500 PL thermal sciences, version V4.30 analyzer. XRD analysis was carried out using X-ray powder diffractometer (Philips 8030X-ray Diffractor) with CuKα radiation (λ=1.5406 Å). The XRD patterns were compared with the standard JCPDS files. The elemental analysis of the powders was done using the energy dispersive X-ray analysis (EDS) technique. This analytical tool was an attachment to the FESEM (field emission scanning electron microscope) unit. FT-IR analysis was performed with a Perklin Elmer UK paragon - 500 spectroscope in the mid infrared region (4000–400 cm^{-1}). For each sample preparation, approximately 2 mg of sample was dispersed in 300 mg of KBr powder and pressed into a pellet. The pellets were used for the spectral analysis. The UV-Vis analysis was conducted using VARIAN Cary 5000 scan spectrophotometer. The photoluminescence study was executed using VARIAN Cary Eclipse Fluorescence spectrophotometer in the wavelength range of 350 to 600 nm.

3. Results and Discussion

In order to understand the thermal decomposition and dissociation reactions that occur during the precursor transformation into the final product CWO, differential thermal analysis and thermo gravimetric analysis were performed using CeO_2 and WO_3 as precursors in the presence of NaCl and KCl eutectic salts. Figure 2 shows the corresponding TGA-DTA curve. The possible reactions are evaluated in the temperature range of 35 to 800 C with a heating rate of 10 C/min under air atmosphere. Thermal behaviour of the sample is investigated and examined for the loss of moisture and elimination of other impurities. The curve exhibits discrete regions of weight loss on the final product CWO. There is a gradual decrease in weight loss noticed between room temperature to 260.88 C. Beyond this temperature, there is an enormous amount of loss in weight that has been observed upto 272.28 C. The major weight loss in this region is attributed to the dissociation of chemical compounds especially oxygen from the precursor. After this temperature, the loss in weight is meagre indicating the phase transformation of amorphous powder into crystalline CWO. The DTA curve reflects the same information where an exothermic peak appeared at 217.90 C indicating the chemical dissociation of inbound water molecules. Another exothermic peak appears at 262.66 C which is specially attributed to the decomposition reaction of the reactants. The gradual decrease in the DTA curve upto 800 C exhibits the transformation of the reactants into the final product CWO.

The composition and the phase purity of the products were first examined by XRD. Figure 3 shows strong and sharp diffraction peaks indicating good crystallinity of the sample[23]. CWO belongs to the monoclinic phase (cell parameters a= 0.781 nm, b=1.172

nm and c= 1.158 nm, β = 109°) of crystal system with $C_{2/c}$ space group (JCPDS No. 85-0143). The emergence of additional peaks located at 33 , 45 , 69 and 77 (marked by a star) in the XRD patterns as shown in Figure 2 confirms the formation of secondary phase (WO_3) (JCPDS No 23-0747) in CWO sample[24].

The particle size is calculated from Debye Scherrer equation (1),

$$D = (0.9*\lambda)/ (\beta*\cos\theta) \text{------- (1)}$$

Where β is the full width half maximum (FWHM) of XRD lines, λ = 1.54060 Å[18]. The average crystalline size of the particle is found to be around 41 nm.

The dislocation density (δ) can be calculated by the formula (2)

$$\delta = 1/D^2 \text{------ (2)}$$

By using this equation, the δ value is 81.328×10^{-5} nm^{-2}. We have also calculated the strain for CWO as 5.224×10^{-10} by using the equation (3)

$$\varepsilon = (\lambda/\cos\theta – \beta)/\tan\theta \text{------ (3)}.$$

Figure 4(a) shows the morphology of CWO product which is found to be diamond shaped crystals in the size range of micrometers. The magnified image of this diamond like structure as shown in Figure 4(b) indicates that it appears to be constituted of particles less than 100 nm in size. It is clear from the images that particles have a tendency to agglomerate and the size distribution is not homogenous. The analysis of FESEM images shows that most of the particles are faceted in morphology.

EDS analysis provides data on chemical composition across the interface by tracing characteristic X-rays generated as a result of transitions between inner atomic electron energy levels of a specific element. EDS analysis shown in Figure 5 reveals that the CWO powder is mainly composed of Ce, W and O. The spectrum also shows carbon due to the carbon tape used to spread the powder sample. Table 1 provides data on elemental composition details of CWO.

Figure 6 shows the FT-IR spectrum of CWO and the corresponding assignment is shown in Table 2. FT-IR spectrum gives us information with regard to in plane and out of plane segmental vibration of atoms and/or molecules with associated energies in the infrared regime. The FT-IR band between 3754.84 cm^{-1} and 1645.97 cm^{-1} corresponds to the (O-H) stretching mode of water molecules[25]. The peak at 3475.68 cm^{-1} is attributed to the symmetric stretching vibration ($_{sym}$) related to WO_3 and the intercalated water molecules (W-OH…H_2O). Apart from these, a strong stretching vibration visible at 801.15 cm^{-1} is responsible for (W-O-W) in the inorganic compound[26]. The spectrum shows a band at 1377.57 cm^{-1} which is mainly due to Ce-O band. The band at 801.15 cm^{-1} also corresponds to Ce-O band[27]. The various bands appearing at the FT-IR spectrum affirms the formation of CWO.

Figure 7 shows the UV-reflectance spectrum for the CWO sample which admits that the reflectance increases abruptly with the wavelength upto ~450 nm and then

there is gradual increase in reflectance in the scanned region. The value of optical gap E_g is calculated using the well known Tauc plot[28] (Figure 8(a and b)). For indirect bandgap semiconductors (allowed transitions), the extrapolation of straight line to intersecting point with $h\nu$ axis at $\alpha = 0$ gives the value of indirect band gap in the $(\alpha h\nu)^{1/2}$ versus $h\nu$ plot. The curve is plotted in the medium to high absorption region using the Tauc equation:

$$(\alpha h\nu)^{1/2} = h\nu \ \text{------ (4)}$$

The value of bandgap is found to be 2.84 eV. In the case of direct bandgap semiconductors, the equation used is

$$(\alpha h\nu)^2 = h\nu \ \text{------ (5)}$$

and the value of direct band gap is found by the extrapolation of straight line to intersecting point with $h\nu$ axis at $\alpha = 0$ which is found to be 3.14 eV. Thus from the UV data, we can propose that CWO is an indirect bandgap semiconductor material.

Figure 9 shows the photoluminescence spectrum for CWO sample prepared by molten salt technique. This characteristic fluorescence spectrum reveals the presence of rare earth ion Ce (IV) in which there is electronic transition in the partially filled 4f orbital. The electron present in the occupied 4f shell can be transferred by light absorption into unoccupied levels of higher energies[29]. CWO excited by 370 nm shows emission band in the visible region having peak at around 423 nm (violet region) which is characteristic of the compound. From the PL spectra, we have determined the band gap values for the CWO samples using the Planck's equation[30]

$$E_g = 1240/\lambda_{max} \text{------ (6)}$$

where λ_{max} is the maximum emission wavelength in nm. By using the above equation, the band gap energy value is determined and it is found to be 2.93 eV which is in good agreement with the value calculated using Tauc plot of UV spectral data.

4. Conclusion

CWO nanoparticles were successfully prepared by a single step, comprehensive molten salt technique. The TGA-DTA study discloses that the compound is formed at around 600 C and the formation involves several exothermic reactions. XRD patterns and FESEM micrographs divulge the formation of desired monoclinic phase of scheelite type structure with the grain size in the range of nanometers. The EDS spectrum declares that the obtained product does not contain any impurities. The FTIR spectrum shows the characteristic vibration modes of CWO. From the UV spectrum and the corresponding Tauc plot, we can report that CWO is an indirect band gap semiconductor with energy gap between the conduction and valence band equal to 2.84 eV. CWO shows PL excitation band in the near UV region having peak at 370 nm and the corresponding emission occurs at 423 nm which is typical for CWO.

Table 1 Elemental composition of CWO as obtained from EDS data

Element	Wt (%)	Atomic Fraction (Z)
Ce	13.29	2.72
W	39.13	6.11
O	38.01	68.25
C	9.58	22.91

Table 2 Assigned vibrational modes as revealed from FT–IR spectra

S.No.	Group	Wave number (cm^{-1})	Assignment
1	WOH…H$_2$O	3754.84 3475.68	$_{sym}$(OH)
2	O-H	2927.18 2375.15	OH
3	O-H, H-O-H	1645.97	δOH in W–OH
4	W-O, Ce-O	1377.57 1236.09	(W-O), (Ce-O)
5	W-O	933.52	W-O
6	Ce-O, W-O-W	842.61 801.15	(W-O-W)
7	Ce-O	724.23 454.94	Ce-O
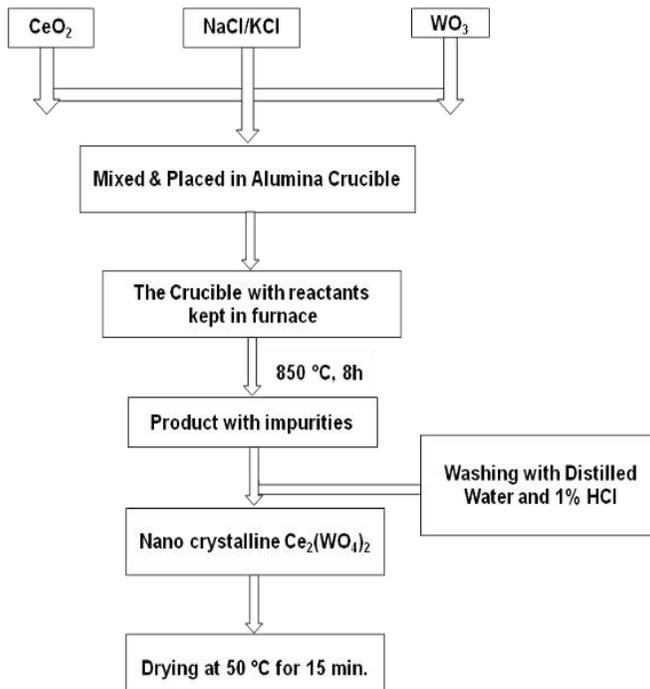
Figure 1 Schematic representation displaying various stages for the synthesis of CWO
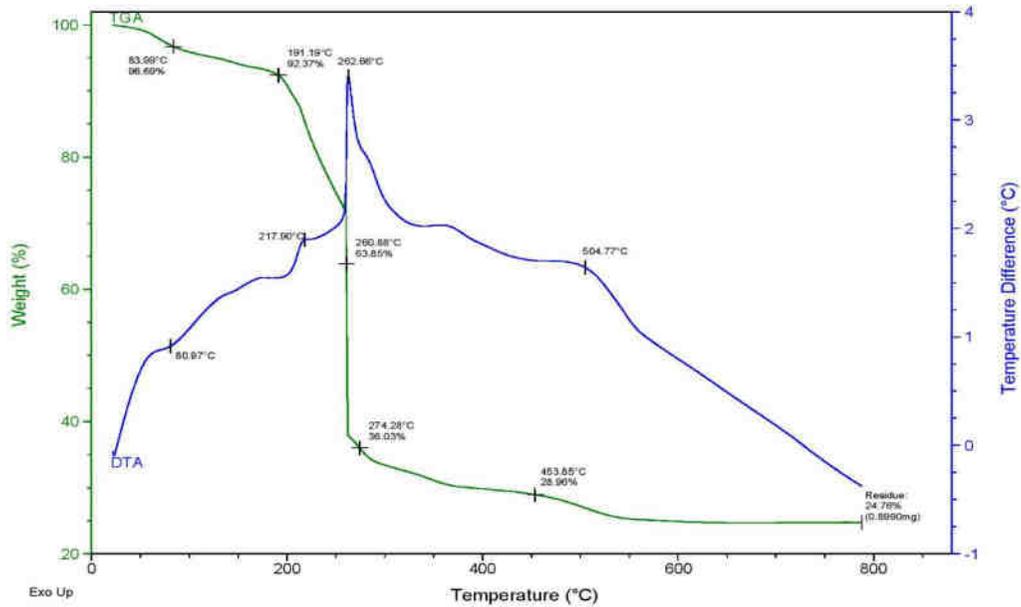
Figure 2 TGA/DTA curves of CWO
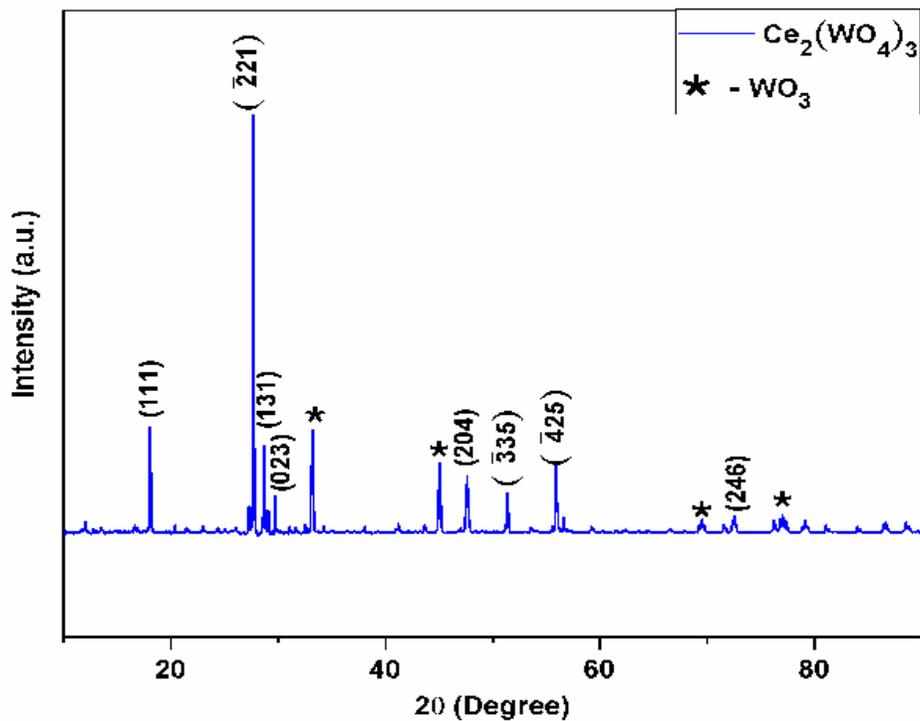

Figure 3 XRD Pattern of CWO particles
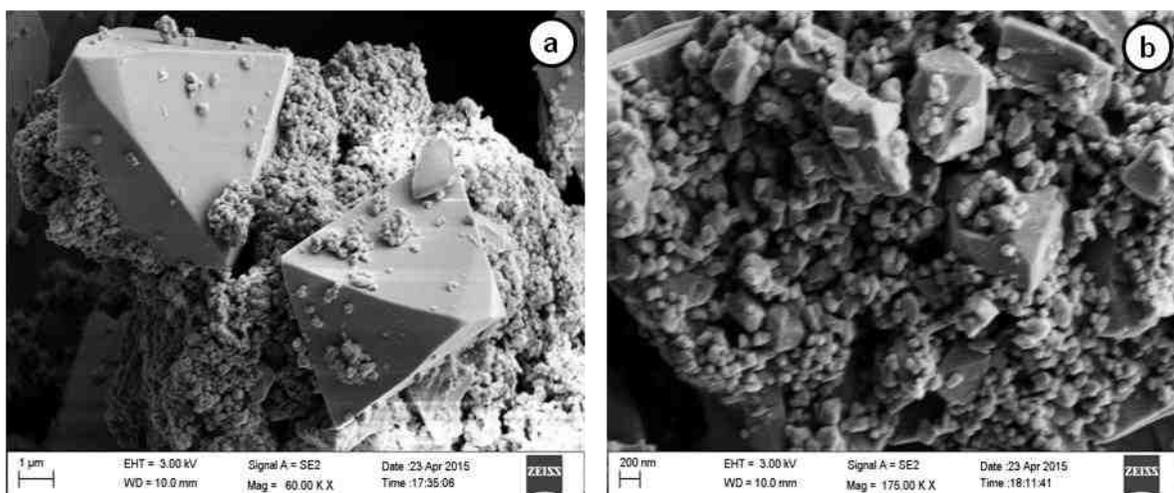
**Figure 4 FESEM images of CWO (a); magnification of 60 kx (b);
Magnification of 175 kx**
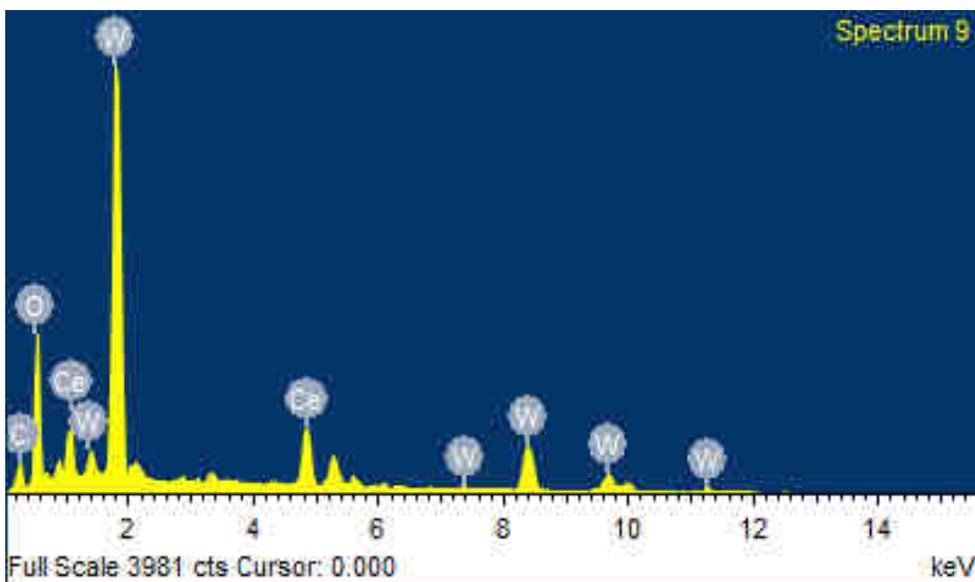
Figure 5 EDX Spectrum of CWO
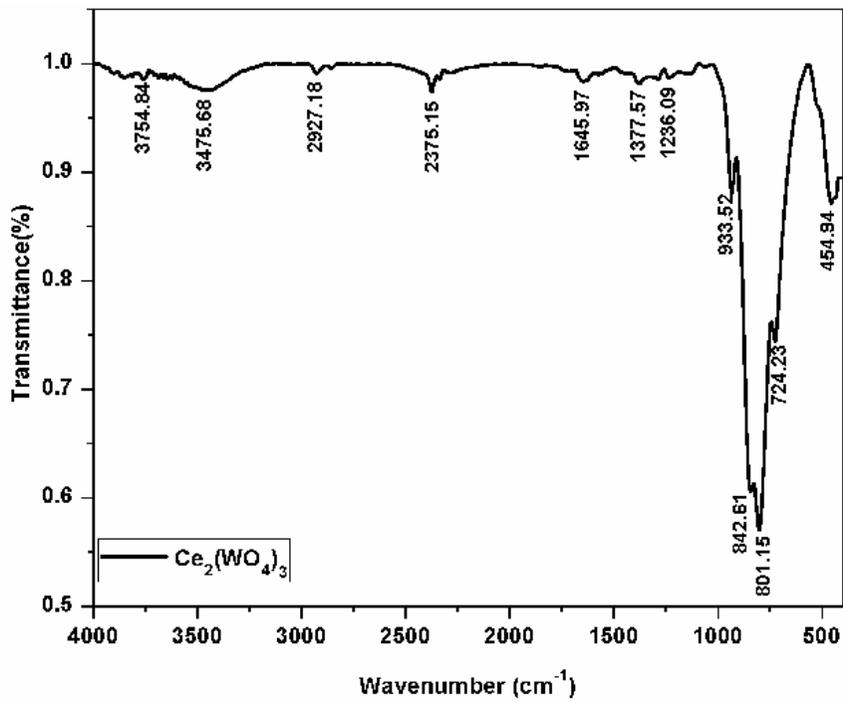
Figure 6 FTIR spectrum of CWO
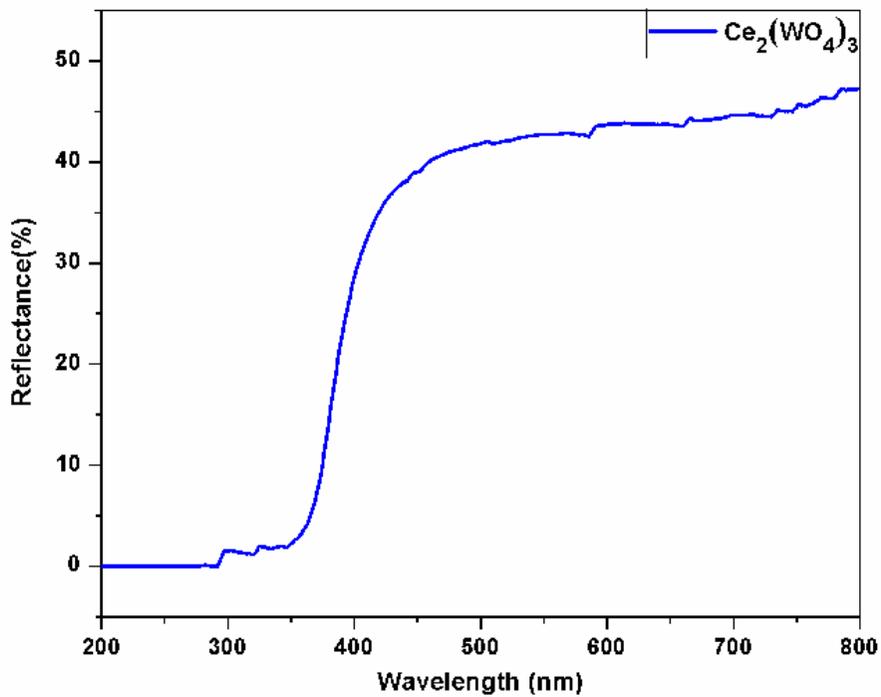
Figure 7 UV-DRS spectrum of CWO
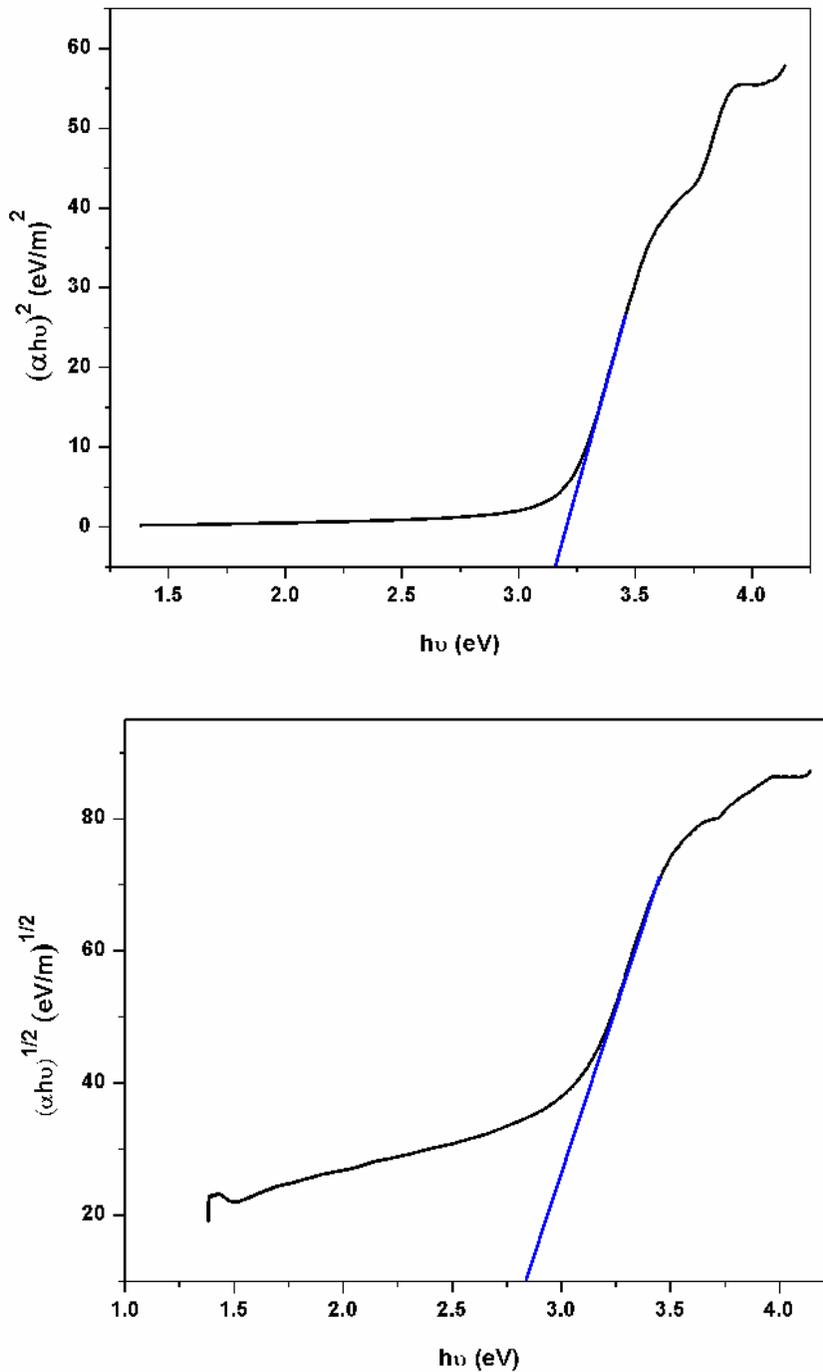
Figure 8 Tauc Plot for bandgap determination (a); plot of (αhυ)² versus hυ (b); plot of (αhυ)^{1/2} versus hυ
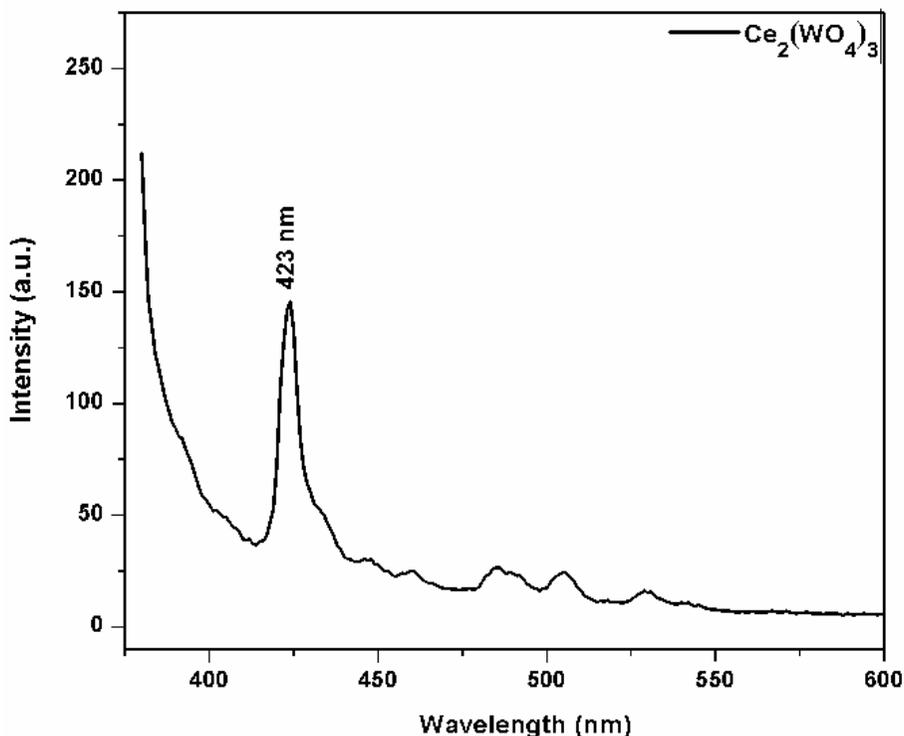
Figure 9 Luminescence spectrum of CWO when excited using laser pulse of 370 nm

Reference
1. J. M. Lawrence, P. S. Riseborough and R. D. Park, Rep. Prog. Phys. 41, 1 (1981)
2. S. Patil, S. K. Pandey, V. R. R. Medicherla, R. S. Singh, R. Bindu, E. V. Sampathkumaran, K. Maiti, K, J. Phys. Condens. Matter 22, 255602 (2010)
3. S. Patil, V. R. R. Medicherla, R. S. Singh, S. K. Pandey, E. V. Sampathkumaran, K. Maiti, Phys. Rev. B 82, 104428 (2010)
4. S. Patil, K. K. Iyer, K. Maiti, E. V. Sampathkumaran, Phys. Rev. B 77, 94443 (2008)
5. H. R. Ott and Z. Fisk, in American Chemical Society, Edited Dennis R. Salahub and Michael C. Zerner, ACS Symposium Series, (2009), Vol.394, pp. 260-272.
6. Z. Wu, R. E. Benfield, L. Guo, H. Li, Q. Yang, D. Grandjem, Q. Li and H. Zju, J. Phys. Condens. Matter 13, 5269 (2001)
7. M. Hirano, E. Kato, J. Am. Chem. Soc. 79, 777 (1996)
8. H. Mitsuru, K. Yoshikiro, K. Masahiro, S. Yasuhiko, J. Mater. Sci. Lett. 15, 1608 (1996)

9. N. Guillou, L. C. Nistor, H. Fuess, H. Hahn, Nanostruct. Mater. 8, 545 (1997)

10. S. Takao, M. Hirotari, Chem. Mater. 9, 2197(1997)

11. R. L. Dutta, Inorganic chemistry, third edition, The New Book Stall, Calcutta (1986), pp. 261.

12. T. George, S. Joseph, S. Matnew, J. Phys. 65, 793 (2005)

13. P. G. Hall, D. A. Armitage, R. G. Linford, J. Chem. Thermodyn. 17, 657 (1985)

14. S. H. Yu, M. Antonietti, H. Colfen, M. Giersig, Angew. Chem. Int. Ed. 41,2356 (2002)

15. H. T. Shi, L. M. Qi, J. M. Ma, H. M. Cheng, Chem. Commun. 16, 1704 (2002)

16. H. T. Shi, L. M. Qi, J. M. Ma, H. M. Cheng, J. Am. Chem. Soc. 125, 3450 (2003)

17. D. Chen, G. Z. Shen, K. B. Tang, Z. H. Liang, H. G. Zheng, J. Phys. Chem. B 108, 11280 (2004)

18. C. R. Indulal, G. Sajeev Kumar, A. V. Vaidyan and R. Raveendran, Indian J. Pure and Appl. Phys. 48, 893 (2010)

19. L. Xu, J. Shen, C. Lu, Y. Chen and W. Hou, Cryst. Growth Des. 9, 3129 (2009)

20. S. Huang, X. Zhang, L. Wang, L. Bai, J. Xu, C. Li and P. Yang, Dalton Trans. 41, 5634 (2012)

21. W. Shan, F. Liu, H. He, X. Shi and C. Zhang, Chem. Commun. 47, 8046 (2011)

22. A. M. Kamash, B. El-Gammal, A. A. El-Sayed, J. Haz. Mat. 141, 719 (2007)

23. A. M. Kaczmarek, Y. Ya Liu, P. V. D. Voort and R. V. Deun, Dalton Trans. 42, 5471 (2013)

24. S. J. Naik, S. Uma, R. B. Tangsali and A. V. Salker, J. Phys. D: Appl. Phys. 44, 115404 (2011)

25. D. Modi, M. Srinivas, D. Tawde, K. V. R. Murthy, V. Verma and N. Patel, J. Experimental Nanoscience (2014)

26. V. B. Kumar and D. Mohanta, Bull. Mater. Sci. 34, 435 (2011)

27. D. Girija, H. S. Bhojya Naik, C. N. Sudhamani and B. Vinay Kumar, Archives of Applied Science Research 3, 373 (2011)

28. J. Tauc, Editor, Amorphous and Liquid Semiconductor, Plenum Press, Newyork (1974)

29. L. K. Joseph, K. R. Dayas, S. Damodar, B. Krishnan, K. Krishnankutty, V. P. N. Nampoori and P. Radhakrishnan, Spectrochimica Acta Part A : Molecular and Biomolecular Spectroscopy, 71, 1281 (2008)

30. P. Karthick Kannan, R. Sarawathi and L. John Berchmans, Res. J. Chem. Sci. 3, 1 (2013)

வாழ்தல் என்பது...

முனைவர் சீ.காயத்ரி தேவி
தமிழ்துறை, மன்னர் திருமலை நாயக்கர் கல்லூரி, மதுரை

எண்ணங்கள் மனித வாழ்க்கையில் மிகவும் முக்கியமான பங்கு வகிக்கின்றன. ஒவ்வொரு மனிதனும் அவனுடைய எண்ணங்களால் தான் உருப்பெறுகிறான். எண்ணங்கள் உயர்வானவையாக விளங்கினால், அவற்றுக் கேற்ப மனிதன் உயர்நிலையை எய்துகிறான். சிறுமையான எண்ணங்களால் மனிதன் தாழ்ந்த நிலைக்குத் தள்ளப்படுகிறான். ஆக, ஒவ்வொரு மனிதனின் வாழ்வு நிலைக்கும் அவனுடைய எண்ணங்களே காரணமாகின்றன என்பதை உளவியல் அறிஞர்கள் கூறுகின்றனர். இந்த உளவியல் உண்மையைக் கருத்தில் கொண்டே 'உள்ளுவதெல்லதும் உயர்வுள்ளல்' என்றும் 'எண்ணிய எண்ணியாங்கு எய்துப' என்றும் திருவள்ளுவர் எண்ணங்களின் ஆற்றலை விதந்தோதுகிறார்.

எண்ணங்களின் ஆற்றலை அளவிட்டுக் கூறுதல் இயலாது. ஆனால், மனிதன் முழுமையான வாழ்க்கையைப் பெற்று, வாழ்வில் நிறைவு காண்பதற்கு எண்ணங்கள் உதவுகின்றனவா என்ற கேள்வியை நாம் கருதிப் பார்ப்பதில்லை.

கடந்த இருபதாம் நூற்றாண்டில் வாழ்ந்து சென்ற மெய்ப்பொருளறிஞர் **ஜே.கிருஷ்ணமூர்த்தி**, இக்கேள்வியை நம்முன் வைக்கிறார். ஆழமான முறையில் இக்கேள்விக்குரிய பதிலை ஆராய்ந்து பார்க்குமாறு நம்மை அவர் ஊக்கப்படுத்துகிறார். அவருடன் இணைந்து, அவருடைய ஆய்வில் நாமும் சிறிது பங்கு கொண்டு பார்ப்போமா?

வாழ்தல் என்றால் என்ன?

வாழ்தல் என்பதன் பொருள் என்ன? வாழ்தல் என்பதன் பொருளைக் கண்டறிய வேண்டுமென்றால், நாம் தற்போது எப்படி வாழ்ந்து கொண்டிருக்கிறோம் என்பதை ஆராய்ந்து பார்க்க வேண்டும். நாம் இப்படி வாழவேண்டும், அப்படி வாழ வேண்டும் என்று கூறுவோமாயின், அது வெறும் கருத்தாகவே (theory) அமையும். மெய்யான வாழ்க்கையாகாது. மெய்யாகவே நமது வாழ்க்கை எவ்வாறுள்ளது என்பதைக் கவனித்துப் பார்த்தால், நமக்கு என்ன தெரிகிறது? நாம் எப்போதும் இன்பத்தை (pleasure) நாடிச்சென்று கொண்டிருக்கிறோம் என்பதும், அதற்குரிய செயல்பாடுகளாகவே நம் வாழ்க்கை அமைந்துள்ளது என்பதும் தெள்ளத் தெளிவாக நமக்குப் புலப்படுகிறது. நாம் வாழ்நாள் முழுதும் அதனைப் பெறவே முயன்றவாறு இருக்கிறோம். அந்த அளவுக்கு இன்பம் நமக்கு முக்கியமாகத் தோன்றுகிறது. நம்முடைய மதிப்பீடுகள், ஒழுகலாறுகள் யாவும் இந்த இன்பக்குறிக்கோளை மையமாகக் கொண்ட அமைந்துள்ளன.

ஆனால், இன்பம் இருக்குமிடத்தில் துன்பமும் - அச்சமும் துயரமும் மறைந்திருக்கும் என்பதை நாம் கண்டு கொள்வதில்லை. வெயில் - நிழல், நன்மை – தீமை, ஒளி - இருள் என்றிவ்வாறுள்ள இருமையை (duality) நாம் புரிந்துகொள்ளலாம். அப்போது, இன்பம் என்பது துன்பச் சார்புடையதே என்பதையும் புரிந்துகொள்ளலாம். இருமையைத் தனித்தனியாகப் பிரித்தல் இயலாது. அவை, ஒன்றோடொன்று சார்பில்லாமல் தனித்தனியாக இயங்குவதில்லை. இதனால்தான், 'இருள் சேர் இருவினை' என்றார் திருவள்ளுவர்.

இனி, இன்பம் எப்படி உருவாகிறது என்பதை சற்றே ஆராய்ந்து பார்ப்போம். அந்தி சூழும் வேளை கதிரவன் தொவானத்தில் மறைகின்ற காட்சி. இக்காட்சியை முதல் முதலாகக்

காண்கிறோம் என்று வைத்துக் கொள்வோம். மறைகின்ற கதிரவன், சிவந்த ஒளிப்பிழம்பாகக் கொள்ளை அழகுடன் காட்சி தருகிறான். அவனைச் சூழ்ந்துள்ள மேகக் கூட்டம் அழகுக் குவியலாக, பல்வேறு வண்ணங்களில் ஒளிர்கின்றது. இந்தக் காட்சியைக் காணுகின்ற அந்தக் கணத்தில், உவகை நம்முள் ஊற்றெடுக்கிறது. மறுகணம், அந்தக் காட்சி மறைகிறது. ஆனால், அந்த அழகுக் காட்சியில் கட்டுண்டு, நாம் பெற்ற மகிழ்ச்சியாகிய அந்த அநுபவம் (பட்டறிவு) (experience) நம் மனதில், மூளையில், பதிவாகிறது. இந்த பதிவின் வெளிப்பாடாக. அந்த எழிற் காட்சியை மறுபடியும் காணாமலேயே நம்முடைய எண்ணம் இன்பத்தை நமக்களிக்கிறது. பட்டறிவை ஓர் உருவகமாக்கி நமது எண்ணம் மறுபடியும் மறுபடியும் அதனை நினைப்பதால், அந்தப் பட்டறிவுக்கு ஒரு தொடர்ச்சியை (continuity) தொடர்ந்து உயிர்ப்பித்துக் கொள்ளும் வலிமையை (vitality) நமக்குக் கொடுக்கிறது.

எண்ணத்தின் இத்தகு இயக்கம் இன்பத்துக்கு மட்டுமா துணைபோகிறது? அச்சத்துக்கும் துயரத்துக்கும் எண்ணமே காரணமாகிறது. நாளை என்ன நடக்குமோ என்ற அச்சம். என்றிவ்வாறு அச்சத்திற்கும் துயரத்துக்கும் நம் எண்ணங்கள் தொடர்ச்சியைக் தருகிறது. இன்பத்தின் தொடர்ச்சிக்கும் எண்ணமே காரணமாகிறது. ஆக, எண்ணங்களால் இயங்குகிற நமது வாழ்க்கை. இன்பம் - துன்பம், அச்சம் - துயரம், விருப்பு – வெறுப்பு என்று இவற்றுக்கிடையே நிகழ்கின்ற போராட்டமாக உள்ளது. தனி மனிதன் உள்ளத்தில் - அகத்தில் - ஏற்படுகின்ற இந்த முரண்பாடுகளின் வெளிப்படையாகவே புறத்தில் உருவாகும் நமது சமுதாயமும் முரண்பாடுகளின் கலவையாக அமைகிறது.

ஆகவே, விருப்பு – வெறுப்பு, மகிழ்ச்சி – துயரம், போன்ற இருமைகளில் தத்தளித்துக் கொண்டுள்ள இந்த வாழ்க்கை முறை அகன்று, முற்றிலும் வேறு வகையில், வேறு பரிமாணத்தில் அமைந்திட இயலுமா? அப்படியென்றால் நாம் நம் இறந்த காலத்தைப் பொருத்தமட்டில் இறத்தல் (துறத்தல்) வேண்டும். இன்பம் என்பது இறந்த காலத்திலும், அதன் நீட்சியாக வருங்காலத்திலும் நிலைபெறுவது. இன்ப நிகழ்வு ஏற்படுகின்ற அந்தக் கணம், இறந்த காலமாக அல்லது வருங்காலமாக நிலைமாற்றம் செய்யப்படுகிறது. இதைச் செய்வது எண்ணம், இன்பம் அச்சம் துயரம் போன்றவற்றுக்கு மென்மேலும் உயிர்ப்பூட்டுவதை நிறுத்திக் கொள்ள இயலுமா?

மகிழ்ச்சியை அளித்திட்ட ஒரு நிகழ்ச்சி, நாம் பெற்ற ஒரு பட்டறிவு (experience) அந்த பட்டறிவில் எண்ணம் ஏன் தலையிட வேண்டும்? தலையிட்டு அதற்கொரு தொடர்ச்சியை ஏன் கொண்டு வந்து சேர்க்க வேண்டும்? கதிரவன் மறைகின்ற அந்த வியத்தகு அழகை, நேற்று நாம் கண்டோம். கண்ட அளவில் காண்பது முடிவுற்றது. அதைத் தொடர்ந்து எண்ணம் புகுந்து, அந்தப் பட்டறிவை நினைந்து அசைபோடுகிறது, அந்த காட்சியை இன்பமாக உருமாற்றம் செய்கிறது. அந்த இன்பத்தைஇ மீண்டும் மீண்டும் பெற்றிட விரும்புகிறோம்.

அந்த அழகுக் காட்சியை மறுமுறை நாம் காண நேரும்போது முன்பு கண்டதனால் பெற்ற இன்பத்தின் உருவகம் நம் மனக் கண்ணிலிருந்து வெளிப்படுகிறது. இப்போது நாம் மனக் கண்ணிலிருந்து வெளிப்படுகிறது. இப்பொது நாம் மெய்யாகவே அந்தக் காட்சியைக் காணுகின்றோமா? இல்லை. நம் மனக் கண்ணிலிருந்து வெளிப்படும் இன்பத்தின் உருவகத்தைத்தான் காண்கிறோம். இறந்தகால நினைவு - இன்பத்தின் உருவகம் - நமக்கும் காட்சிக்கும் இடையே திரையாக நின்று, நாம் காண்பதைத் தடுக்கிறது. அதாவது, நாம் இறந்த காலத்திலேயே மிதந்து கொண்டிருக்கும், நிகழ் காலத்தைத் தவற விடுகிறோம். இதே நிலைதான் பாலியல் உறவிலும், இன்பம் சார்ந்த அனைத்து நிகழ்வுகளிலும் ஏற்படுகிறது.

நாம் வாழுகின்ற கணங்களில் ஏதேனும் ஒரு கணத்தைச் சற்றே நிறுத்தி ஆராய்ந்து பார்போமேயாயின், அந்தக் கணத்தில் நமது மனம். கடந்துசென்ற நிகழ்வைப் பற்றி எண்ணிக் கொண்டிருக்கும், அல்லது வருங்கால நினைவுகளில் திளைத்தவாறிருக்கும். அந்த நிலையில்

நிகழ்காலப் பொழுது, கணத்துக்குக் கணம் நம்மைவிட்டு நழுவிச் சென்று கொண்டேயிருக்கும். நம்முடைய வாழ்தல் இல்லாமலேயே நம்மைவிட்டுச் சென்று கொண்டிருக்கும் நிகழ்காலத்தை நாம் பொருட்படுத்துவதேயில்லை. இப்போது அப்போது என்றில்லாமல் எப்போதும், இதே எண்ணப் போக்கிலேதான் நாம் நம்முடைய பொழுதை கழித்தவாறு இருக்கிறோம். இதுதான் வாழ்வா? நாம் வாழுகிறோம் என்பது மெய்தானா? இதனை வாழ்வு என்று சொல்வதைவிட நம் எண்ணம் விளைவிக்கும் மயக்க நிலை என்று சொல்வதே பொருத்தமாகும். இதனைத்தான்,

ஒருபொழுதும் வாழ்வது அறியார் கருதுப
கோடியும் அல்ல பல

என்று படம் பிடித்துக் காண்பிக்கிறார் நம் வள்ளுவப் பேராசான்.

எண்ணங்களில் தேவையும் தேவையின்மையும்

புற வாழ்வின் எண்ணங்களில் தேவையை யாராலும் மறுக்க முடியாது. நம்முடைய அன்றாடச் செயல்பாடுகளுக்கு எண்ணங்கள் இன்றியமையாததவை. மதுரை மாநகரில், பெரியார் பேருந்து நிலையத்திலிருந்து காந்தி அருங்காட்சியகம் செல்ல விரும்புகின்ற ஒருவர், எந்தப் பேருந்தில் ஏறிச் சென்று எந்த இடத்தில் இறங்க வேண்டும், பின்னர், எந்தத் திக்கில் நடந்து சென்று அருங்காட்சியகத்தை யடையலாம் என்ற அறிவு எண்ணமும் தேவையே. அதுபோல, ஒரு மொழியைக் கற்றுக் கொள்வதற்கு, பல்வேறு அறிவியல் கண்டுபிடிப்புகளுக்கெல்லாம் எண்ணங்களில் தேவை தவிர்க்க முடியாது.

ஆனால், நம் அகவாழ்வுக்கு எண்ணங்கள் தேவைதானா? இன்பம், துன்பம், துயரம், கள்ளம், கடம், வன்மம், பொறாமை போன்ற மனித வாழ்வைச் சீரழிக்கின்ற களைகளுக்கெல்லாம் நீர் பாய்ச்சி, உரமிட்டு வளர்த்து வருபவை எண்ணங்களே. ஆகவே உளவியல் சார்ந்த அகவாழ்வைப் பொருத்த மட்டில் எண்ணங்களின் தலையீடு இருத்தலாகாது.

எங்கெல்லாம் எண்ணங்கள் இன்றியமையாத தேவையோ அங்கெல்லாம் எண்ணங்கள் இயங்கவும், மற்றப் பொழுதுகளில் எண்ணங்களின் இயக்கம் இல்லாமலே நாம் இருந்து கொள்ளவும் இயலுமானால், அத்தகு நிலையில்தான், நாம் நம் வாழ்வில் எதிர்கொள்ளும் ஒவ்வொரு கணமும் முழுமையாக நிறைவாக வாழ்தல் இயலும்.

வாழ்வும் மரணமும்

மரணம் சேர்ந்ததுதான் வாழ்க்கை. வாழ்வு வேறு மரணம் வேறு என்று எண்ணிக்கொண்டிருக்கிறோம். நாம் யாவரும் ஒருநாள் இறக்கத்தான் போகிறோம். மரணம் தவிர்க்க முடியாது.

ஆனால், என்றோ ஒரு நாள் நமக்கு நேரவிருக்கும் மரணத்தை எண்ணி அஞ்சுகிறோம்.

ஊற்றார் உறவினர் அல்லது நண்பர்கள் மரணம் உறுவதையும், அவரைச் சார்ந்தவர்கள் அழுது அரற்றுவதையும் காண்கிறோம். அந்தக் காட்சி மனதில் பதிவாகிறது, எண்ணம் அக்காட்சிக்கு நீட்சியைக் கொடுக்கிறது. அதனால், மரணம் பற்றிய நினைப்பே நமக்கு அச்சத்தை உண்டாக்குகிறது.

மரண அச்சத்தை எண்ணமே உண்டாக்குகிறது. எண்ணம் இறந்த காலத்தைச் சார்ந்தது. நாளை என்ன நடக்கப் போகிறது என்பதுபற்றி, முப்பது ஆண்டுகளுக்குப் பிறகு என்ன நிகழும் என்பது பற்றி எண்ணத்துக்குத் தெரியாது. ஆகவே எண்ணம், மரணம் குறித்த கருத்தியலை முடிந்த மட்டும் தள்ளிப் போடுகிறது. ஏனெனில் எண்ணம் ஒருபோதும் முழுமையாகச் சார்ந்து அமைசதில்லை. துண்டு துண்டாகத்தான் இயங்கும் (fragmented).

நாம் முதுமைப் பருவத்தை எய்துகின்ற நிலையில் எவ்வளவு அருவருப்பாக இருப்போம்? நகைகளை அணிந்துகொள்கிறோம், வண்ண வண்ண ஆடையரீகளை அணிகிறோம், தலைமுடிக்கு வண்ணம் தீட்டிக் கொள்கிறோம். இன்னும் நாம் இளமையாக இருப்பதாகத்

தோற்றமளிக்க விரும்புகிறோம். இவையெல்லாம் நமது துயர்நிலையைத்தான் வெளிப்படுத்துவதாக உள்ளன. நாம் இதுவரை மெய்யான வாழ்தல் என்பது என்ன என்பதைப் புரிந்து கொள்ளாமலே காலத்தைக் கழித்துள்ளோம் என்பதையுமே மேற்குறித்த செயல்பாடுகள் உணர்த்துகின்றன.

உளவியல்படி, நாம் இதுவரை அறிந்தவற்றிலிருந்து இறந்துவிட (விடுபட) இயலுமா? நாம் மரணம் உறும்போது இதுதான் நிகழப் போகிறது. நமது குடும்பத்தை, நாம் சேர்த்து வைத்துள்ள உடைமைகளை அறிவை ஆக்கத்தை – யாவற்றையும் விட்டுவித்தான் போகிறோம்.

மரணம் நம் கதவை தட்டும்வரை நாம் ஏன் காத்திருக்க வேண்டும்? உயிர்ப்பாற்றலுடன், உடல் வலிமையுடன் நாம் வாழுகின்ற இந்த நிலையிலேயே நாம் சேகரித்துவைத்துள்ள எல்லாவற்றிலிருந்தும், அனைத்துப் பற்றுகளிலிருந்தும் முழு விருப்பும் நம்மை நாமே விடுவித்துக் கொள்ள இயலாதா? உள்ளம் சார்ந்த இறப்பு (துறவு) என்பது இந்த காலத்திலிருந்து முழுமையாக விடுபடுதல் என்பது பொருள். நம்முடைய அனைத்து இன்பங்களிலிருந்தும் நாம் போற்றிப்புரந்த அனைத்து நினைவுகளிலிருந்தும், பொருள்களிலிருந்தும் இறத்தல் வேண்டும். மெய்யாவே நாம் ஒவ்வொரு நாளும் இறத்தல் வேண்டும். நேற்று நாம் பெற்ற இன்பத்தை இறப்பது (துறத்தல்) என்றால், அந்த இன்பத்துக்கு எண்ணம் தொடர் இருப்பை அளிப்பதற்கு முன்பாகவே, அவ்வப்போது, உடனுக்குடன் இறக்க வேண்டும். இவ்வாறு மரயத்தையும் இணைத்துக் கொண்டு நம்மால் வாழ்ந்திட இயலுமானால், எப்போதும் இளமையாக புத்துணர்ச்சியுடன் நம்மால் வாழ்ந்திட இயலும். இவ்வாறு இறத்தலையே 'தியானம்' என்கிறோம். இதுவே மெய்யான தியானம். மனித வாழ்வு தியானமாக (Meditative life) அமையவேண்டும். இந்த வாழ்வையே மரணமிலாப் பொருவாழ்வு என்று அறிவர்கள் போற்றுகிறார்கள்.

'இத்தகு தியான வாழ்வில் 'நான்' 'எனது' என்ற தன்முனைப்பிலிருந்து மனிதன் முற்றிலுமாக விடுபட்டவனாகிறான். இந்த 'நான்' என்பதுதான் என்ன? நம் நினைவுகளழன் குவியல்தான் 'நான்' என்பது. கடந்து போனவற்றைப் பற்றிய நினைவுகள். வருங்காலம் குறித்த கனவுகள். நம்முடைய விருப்பு வெறுப்புகள் உணர்வுகள் போன்ற அனைத்துக் கலவைகளின் மூட்டைதான் 'நான்' என்பது. எப்படி இருக்கும்? அந்த நிலையில் எண்ணங்கள் நம்மை அண்டாது, 'நாம்' என்ற அப்பகுதி முற்றிலும் புதிய பகுதியாக விளங்கும். அந்தந்தக் கணத்தில் மலர்கின்ற புது மலராக நம் வாழ்வு பரிணமிக்கும். நமக்கும் மற்றவர்களுக்கும், நமக்கும் மற்ற உயிர்களுக்கும் இடையில் எந்த மாறுபாடும் இராது. மனித வாழ்க்கை என்பது தனித்த ஒன்றாக இராமல், இந்த அண்டம் முழுவதும் பரவி விரவியுள்ள 'வாழ்க்கை' (Life) என்ற பேரியக்கத்தில் ஒன்றிவிடுகிறது. இந்த ஒர்மைக்குரிய அறிவுப் புலன் (Intelligence) கைவரப் பெற்றவன்தான் மெய்யாகவே வாழ்கின்ற பெற்றியுடையவனாகிறான். மற்றவர்கள் யாவரும் வாழ்க்கை என்ற இயக்கத்தில் இணையாகவர்களாகின்றனர்.

ஒத்தது அறிவான் உயிர்வாழ்வான் மற்றையான்
செத்தாருள் வைக்கப்படும்.

<div align="center">குறள் : 214</div>

'யாதும் ஊரே யாவரும் கேளிர்'

முனைவர் தி.மல்லிகா
தமிழ்துறை, மன்னர் திருமலை நாயக்கர் கல்லூரி, மதுரை

நீல வானில் கருப்பு மேகங்கள் ஒன்றோடொன்று மோதி இடி முழக்கம் செய்தன. ஈர்ப்பின் ஆற்றல் மின்னலாய் இடியாய் நீர்த்துளிகளை இணைத்தது. அந்தத் துளிகள் ஒன்றுடன் ஒன்று சேர்ந்து நீராக மாறி மழையாகப் பெய்தன. பெருமழை: வெள்ளம் திரண்டது. மழைநீர் மலையிலிருந்து கீழ்நோக்கிப் பாய்கிறது.

வேகமாகப் பாய்ந்து அருவி மலையின் அடிவாரத்தில் ஆறாக மாறுகிறது. 'சான்றோர் கவி' எனப் பாய்கின்ற பேராறாய்ப் பாய்கிறது. தன்னுடைய தாயாகிய கடலைப் போய்ச் சேர வேண்டும் என்ற துடிப்பு அதனுள். ஆதலால் வேகம் வெளியே தெரியாதவாறு ஆழமாய் அகலமாய் தன்னுடைய பெருமைகளை வெளியே காட்டிக் கொள்ளாத சான்றோர் போல ஓடுகிறது. அப்படி அகன்று பாயும் நீரில் ஒரு புணை – தெப்பம் மிதக்கிறது. மக்களால் அழகு செய்யப்பட்ட வடிவும் தோற்றமும் கொண்ட தெப்பம்.

அந்த அழகுப் பூத்தேர் ஆற்றின் கடும் வெள்ளத்தில் இழுக்கப்பட்டுப் போகிறதே என்ன செய்ய? நீந்திப்போய்க் காப்பாற்றி ஏதேனும் ஒரு கரையில் சேர்த்து விடலாமா? முடிந்த எந்தக் கரையில் சேர்ப்பது? அதன் போக்கிலேயே விட்டு விடலாமா? தானே மிதந்து தானே நகர்ந்து தானே நீரோட்டத்தோடு தானும் செல்வதுதான் அதனால் இயலுமா?

எல்லாம் வினாக்கள் தாம். விடை சொல்ல முடியாத கேள்விகள். வாழ்க்கையும் அப்படிதான். மானிட வரலாறும் அதுதான் இங்கு ஊழ்தான் பேராறு. அந்த விதியின் கழியில் அகப்பட்டுத் துன்புறும் ஆருயிர்தான் தெப்பம். வாழ்வு பேராறு. இன்ப – துன்பக் கரைகளை ஓட்டிப் பாயும் காட்டாறு. இரண்டுமே பொய்மைகள். தீதும் நன்றும் பிறரால் உன்னைத் தேடி வரவில்லை. இந்தப் பிறப்பிலோ முற்பிறப்பிலோ நீ செய்த தீமையும் நல்லதும் இப்போது தொடர்ந்து வந்துள்ளன. அதற்காக வருந்துவதும் மகிழ்வதும் பித்தர் செயல்.

துன்பமோ இன்பமோ வாழ்வின் முடிவு என்னவாக இருக்கும்? சாதல் புதியதன்று. பிறப்பெடுத்த எல்லா உயிரும் இறுதியில் பெறும் மிகப்பெரிய தெய்வப் பரிசு இறப்பு. ஆறு கடலை நோக்கி ஓடுகிறது. வாழ்வு சாவை நோக்கி ஓடுகிறது. பாய்வதில் ஒரு மகிழ்ச்சி. வாழ்வதில் ஒரு இன்பம். அதனோடு நிறுத்திக் கொள்ளவேண்டும். வாழ்வே இன்பமாக கருதிவிட வேண்டாம். அப்படியே இறப்பு துன்பமானது என்றும் எண்ண வேண்டாம். ஆறு அதன் போக்கில் பாயட்டும். வாழ்வு அதன் இயல்பில் நகரட்டும். இவையெல்லாம் யார் சொன்னார்கள்? கீதையின் தத்துவம் போல இருக்கிறதே: உபநிசத்துக்கள் கூறுவன போல உள்ளனவே!. இவை தமிழன் கண்ட தத்துவ ஞானம். ஈராயிரம் ஆண்டுகளுக்கு முன்னர் கனிந்திருந்த ஞானப்பிழம்பில் ஒரு சிறு துளிதான் இவை. சங்க இலக்கியத்தை ஆழமாகவும் கூர்மையாகவும் நோக்கினால் இவை போன்றவை மணிகளாகச் சிதறிக் கிடப்பதைக் காணலாம். கணியன் பூங்குன்றனார் என்னும் சங்கப்புலவர் பாடி நமக்குக் கிடைத்திருப்பது ஒரே ஒரு பாடல்தான். புறநானூற்றில் வரும் இந்தப் பாட்டின் முதல் வரியைப் பெரும்பாலும் மேடை ஏறும் எல்லோரும் சொல்லாமல் இருப்பதில்லை. 'யாதும் ஊரே யாவரும் கேளிர்' என்பது தான்

அந்த முதல்வரி.   ஆனால் அதைத் தொடர்ந்து வரும் பாடல் அடிகளில் ஞான நிறைவைக் கணியன் பூங்குன்றனார் பொதிந்து வைத்திருப்பதை எத்தனை பேர் உணர்வார்கள்?

தீமையோ, நன்மையோ, இன்பமோ, துன்பமோ பிறரால் பிறரிடமிருந்து வருவதல்ல, நம்மால் நம்மிடமிருந்தே வருகின்றன என்ற தெளிவு கிடைத்தது.   ஆதலால் வருந்துவதும் மகிழ்வதும் வேண்டா: சாதலும் வாழ்வதும் இயற்கையில் என்றும் நடப்பதுதான் என்ற உணர்வும் மேலிடுகிறது. மானுடப் பிறப்பு நடந்த ஒரே காரணத்துக்காக அந்த மண் மட்டுமே சொந்தம் என்று கொண்டாடுவது பிழை.   காலடிபடும் எல்லா மண்ணும் எல்லா ஊரும் சொந்த ஊர்தான். அப்படி விரிந்த மனத்தோடு எல்லா இடங்களையும் அன்போடு நேசிக்க வேண்டும்.   வீடு, வாசல், ஊர், சாதி, மொழி, இனம் என்ற எல்லைகளைத் தாண்டியும் எண்ணிப்பார்க்க வேண்டும். பல நூறு ஆண்டுகள் இவற்றை எல்லாம் எண்ணி ஆராய்ந்து தெளிந்த பேரறிஞர்கள், அருளாளர்கள் கண்ட முடிவு இவையே ஆகும். செயலாற்ற முற்படும்போது இரண்டு வகையான மனச்சிக்கல் நம்மை எதிர் நோக்கலாம்.   செல்வம், செயலாற்றும் தன்மை, கல்வி, அறிவு, செல்வாக்கு இவற்றால் மேம்பட்டவர்கள் 'மாட்சியில் பெரியவர்கள்'.   பெரிய விளக்கின் முன்னால் கை விளக்கா? கதிரவனின் ஒளி முன்னால் அகல் விளக்கா? கதிரவன் அவனளவில் பெரியவன், கைவிளக்கு தன்னளவில் பெரியதே.   'அவரவர் ஆற்றான்' என்பது பொது விதி. சிறியன தனது எல்லைக்கு பொலிய வேண்டும்.   அதுவே சிறப்பு; பெருமைக்கும் உரியது. பிறரோடு ஒப்பிட்டுத் தன்னை நிலைநிறுத்தும் பண்பு ஒவ்வாதது.   ஒவ்வொருவருக்கும் ஒவ்வொரு ஆற்றல்.   ஒருவரை ஒருவரோடு ஒப்பிட்டுப் பார்க்கும் போது செயல்படுவதில் குறைகள் தோன்ற நேரிடும்.   உயர்வு மனப்பான்மை பிறரை மதிக்காத செருக்கை உண்டாக்கும்.   பிறரை எள்ளத் தோன்றும்.   ஆதலால் சிறியோரை இகழ்தல் எந்த நிலையிலும் கூடாது.   'மாட்சியில் பெரியோரை வியந்து நிற்பதைச் செய்தாலும் கூட ஒரு வகையில் ஏற்றுக் கொள்ளலாம். ஆனால் சிறியவர்களை, நம்மிலும் தாழ்ந்தவர்களை இகழ்வது பெருங்குற்றம்.

ஆற்றில் ஓடும் நீர் எதை எதிர்பார்த்துப் பாய்கிறது? மலையிலும் ஆறு பாய்கிறது.   மடுவிலும் பாய்கிறது.   அதற்கு இரண்டும் ஒன்றுதான்.   வாழ்விலும் ஏற்ற இறக்கங்கள் உண்டு.   ஏற்றம் வருவதும் இறங்கித் தாழ்வதும் நம் கையில் இல்லை.   இன்ப, துன்பம், மகிழ்ச்சி, வருத்தம், வெற்றி, தோல்வி, பிறப்பு, இறப்பு, இருள், ஒளி என்ற எதிரெதிர் இணைகள் இந்த முரண்பட்டனவாகத் தோன்றும் பண்புகள், மனித மனத்தினை எந்த வகையினும் பாதிக்காது. அதுவே உயர்ந்த நிலை, ஒவ்வொருவரும் பெற வேண்டிய உன்னத நிலையும் ஆகும்.

இந்தத் தத்துவம் இன்று நேற்று, தோன்றியதன்று.   ஈராயிரம் ஆண்டுகளுக்கு முன்னர் கணியன் பூங்குன்றனார் மனதில் மலர்ந்த உயர்ந்த கோட்பாடு.   இதனுள் சமய வெறி காணோம். பணி செய்து இன்ப நிலை காணும் மேம்பாடே ஒளிர்கிறது.

> "யாதும் ஊரே யாவரும் கேளிர்
> தீதும் நன்றும் பிறர் தர வாரா
> நோதலும் தணிதலும் அவற்றோர் அன்ன
> சாதலும் புதுவது அன்றே வாழ்தல்
> இனிதென மகிழ்ந்தன்றும் இலமே முனிவின்
> இன்னாது என்றலும் இலமே மின்னொடு
> வானம் தண்துளி தலைஇ ஆனாது
> கல்பொருது இரங்கும் மல்லல் பேர்யாற்று
> நீர்வழிப் படூஉம் புணைபோல் ஆருயிர்
> முறைவழிப் படூஉம் என்பது திறவோர்
> காட்சியில் தெளிந்தனம் ஆதலின் மாட்சியின்
> பெரியோரை வியத்தலும் இலமே
> சிறியோரை இகழ்தல் அதனின்றும் இலமே''   (புற.192)

தமிழ் இலக்கியத்தில் மரங்கள்

முனைவர் கோ.தேவிபூமா
உதவிப்பேராசிரியர் - தமிழ்த்துறை,
மன்னர் திருமலை நாயக்கர் கல்லூரி (தன்னாட்சி), மதுரை

மரத்தை "தரு"என்பது பழைய தமிழ்ப்பழக்கம். நிழல்தரும், மழைதரும், காய்தரும், கனிதரும், காற்று தரும். காய்ந்து விழுந்தால் விறகாக தன்னையேதரும். இப்படித்தருவதால் அதன்பெயர் தரு. தொல்காப்பியர் தமது மரபியலுள்ஒறறிவு உடைய தாவர இனங்களைக் குறிப்பிட்டுள்ளார்.

"புல்லும் மரனும் ஓர் அறிவினமே
பிறவும் உளவே அக்கிளைப்பிறப்பே"

<div align="right">தொல். 1527</div>

என்ற நூற்பா விளக்கும்.

மரம் வளர்க்கவேண்டும், மனிதநேயம் தழைக்க வேண்டும் என்ற சிந்தனைதமிழ் இலக்கியத்திலே காணப்படுகிறது.

"போதிமரத்தை புத்தரும்
குறுந்தமரத்தடியில் மாணிக்கவாசகரும்
புளிய மரத்தடியில் நம்மாழ்வாரும் ஞானம் பெற்றனர்"

புன்னைமரம்

மயிலைக் கோயிலுக்கு தலவிருட்சம் புன்னைமரம். தலவிருட்சம் அந்தமரம் என்றால் அந்த மரத்தை ஊரில் யாரும் வெட்டக்கூடாது. சங்ககால மக்கள் தருக்களை (மரங்களை) உயிராக உறவாக எண்ணிப் பாதுகாத்தனர். ஆனால் தற்காலத்தில் தருக்களை (மரங்களை) நாம் அழிக்கிறோம். வளர்ப்பதில்லை.இக்கருத்தை நற்றிணைப் பாடல்வழியே எடுத்துக் காட்டுகின்றார்.

"விளையாடு ஆயமொடு வெண்மணல் அழுத்தி
மறந்தனம் துறந்த காழ்முனை அகைய
நெய்பெய்தீம்பால் பெய்தினிது வளர்ப்ப
நும்மினுஞ் சிறந்தது நுவ்வை ஆகுமென்று
அன்னை கூறினள் புன்னையது சிறப்பே"

<div align="right">(நற்றிணை)</div>

தோழியரோடு சேர்ந்து ஒருநாள் வெண்மணலில் புன்னை மரவிதையை ஊன்றி விளையாடினோம். அப்போது நாங்கள் மறந்துவிட்டு சென்ற புன்னை மரவிதை ஒன்று வேரூன்றி முளைத்தது. மீண்டும் அதனை நோக்கி மகிழ்ந்த நாங்கள் நெய்கலந்த இனிய பாலினை நீராகவார்த்து இனிமையோடு வளர்த்தோம். அவ்வாறு வளர்த்து வரும் நாளில் எங்களிடம் எங்கள் அன்னை இந்த புன்னைமரம் உன்னுடைய தங்கை என்று கூறினாள். காதலன் காதலியை பார்க்க வருகிறான். பார்க்க வருகின்ற அவன் தினம் தினம் புன்னைமரநிழலில் உட்கார்ந்து பேசிவிட்டு செல்கிறான். அதனால் அவள் நாணத்தை அடைகிறாளாம்.

எங்கள் தங்கையாகிய இந்த புன்னைமர நிழலில் உன்னுடன் நகைத்து விளையாடுவதற்கு நாங்கள் நாணத்தை அடைகின்றோம் என்று தலைவி கூறுவதிலிருந்து மரங்களை உயிராக உறவாக பேணி பாதுகாத்தனர்.

புளியமரம்

நம்மாழ்வார் குழந்தையாக இருந்தபொழுது இவரது பெற்றோர் இவரைப் பெருமாள் கோவிலில் இறக்கி விட்டனர். நம்மாழ்வார் தவழ்ந்து சென்று புளியமரத்தடியில் பதுமாசனம் இட்டு யோகத்தில் அமர்ந்தார். அந்த புளியமரத்தை ஆதிசேடனின் அவதாரம் என்பர். வைணவர் இன்னும் அப்புளியமரத்தை திருப்புளி ஆழ்வார் என்பர்.

பிறந்தது முதல் பேசாதிருந்து புளியமரத்தடியில் தவம் இயற்றித் திருமாலின் திருவருளால் பேசினார். பாடினால் திருமாலை மட்டுமே பாடுவது என்னும் கொள்கையர்.

"சொன்னால் விரோதமிது ஆகிலும் சொல்லுவன் கேண்மினோ
என்னாலில் இன்கவியில் ஒருவர்க்கும் கொடுக்கிலேன்
தென்னாதெனா என்று வண்டுமுரல் திருவேங்கடத்து
என்னானை என்னப்பன் எம்பெருமான் உளனாகவே!

குறுந்தமரம்

திருவாதவூரார் பல்கலைகளையும் கற்றுத்தேர்ந்தவராகி அரிமர்த்தனபாண்டியனிடம் அமைச்சராகப் பணியாற்றினார். பாண்டியன் படைக்கு குதிரைகள் வாங்கி வருமாறு அவரையே அம்மன்னன் தேர்ந்தெடுத்து அனுப்பி வைத்தான். அரச கருவூலத்திலிருந்து நிதித்திரளை வாரிக்கொண்டு குதிரை வாங்கி வரப் புறப்பட்டார் வாதவூரார். வாதவூரார் திருப்பெருந்துறையை அடைந்தார். அங்கே இருந்த குருந்த மரத்தின் அடியில் சிலபெருமானே குருவடிவம் எடுத்து அமர்ந்திருந்தார். அவர் முன் சென்று வாதவூரார் பணிந்தார். சிவஞானத்தை அவருக்குப் போதித்து திருவடி தீட்சையும் கொடுத்தார் குருமூர்த்தி வடிவத்தில் வந்த சிவபெருமான். தன் மந்திர கோலத்தை அகற்றிக் கோவணம் பூண்டு வாய்பொத்திக் குருவின் முன் வாய்பொத்தி நின்ற வாதவூரரை அவருடன் வந்த அரசனின் சிப்பந்திகள் அழைத்தனர். உடன் செல்ல மறுத்துவிட்டார் வாதவூரார்.

பாண்டியன் ஒற்றர்களிடம் திருமுகம் கொடுத்து கையோடு வாதவூரரை அழைத்து வரக் கட்டளையிட்டான். குருமூர்த்தியின் திருமுகம் கண்ட கண்ணால் வேறொரு திருமுகம் காண்பதில்லை என்று கூறி வாதவூதர் அதனைக் குருவிடமே கொடுத்துவிட்டார். அதனைப் படித்த குருமூர்த்தி ஒரு மாணிக்க கல்லை ஒற்றர் கையில் கொடுத்து குதிரைகள் வர நல்ல நாளில்லை. ஆவணி மாதம் மூல நட்சத்திர நாளன்று மதுரைக்கு குதிரைகள் வந்து சேருமென்று போய்ச்சொல் என்று அரசனிடம் திருப்பி அனுப்பினார். சொன்னநாளும் அருகில்வந்து கொண்டிருந்தது. ஆனால் குதிரைகள் வருவதாக காணோம். மன்னனுக்கு கோபம் வந்தது. மீண்டும் ஒற்றர்களிடம் குதிரைகள் இருக்குமிடத்தை அறிந்து கொண்டு வரச்சொல்லி அனுப்பினான். அவர்கள் எங்குமே குதிரைகள் தென்படவில்லை என்ற செய்தியோடு திரும்பினர்.

ஆவணி மூலமும் வந்தது. குதிரைகள் வரவில்லை. இன்றைக்கு குதிரைகள் வராவிட்டால் உம்மை வெயிலில் நிறுத்துவேன் என்று கூறிப் பாண்டியமன்னன் வாதவூரரை எரிக்கும் வெயிலில் நிறுத்தினான். அதற்கு வாதவூரர் அசையவில்லை. இரும்புக்கிட்டியால் இறுக்கினார். வாதவூரர் சிவனை தஞ்சம் அடைந்தார் உடனே சிவபெருமானின் சிவகணங்களை குதிரை வீரர்களாகவும், நரிகளைக் குதிரைகளாகவும் மாற்றி மதுரைக்கு அனுப்பி தாமே அதற்குத் தரைவராக நடத்தி வந்தார்.

ஏராளமான உயர்ரகக்குதிரைகள் மதுரையை நோக்கி வரும் செய்தியை ஒற்றர்கள் மன்னனுக்குச் சொல்லவே அவன் மகிழ்ந்து அமைச்சரைப் போற்றினான். அன்றிரவே குதிரைகள் எல்லாம் நரியாக மாறி முதலில் அந்த கொட்டயில் இருந்த குதிரைகளையும் கடித்துவிட்டு ஓடின. அதனால் கோபம் கொண்ட மன்னர் கங்கையை வைகையில் பெருக்கெடுக்கச் செய்கிறார்.

கரையை உடைத்துக் கொண்டு ஆறு பெருக் கெடுத்து ஓடுகிறது. உடனே பாண்டியன் வீட்டிக்கு ஓர் இளைஞன் வந்து கரையை அடைக்க வேண்டும் என்று முரசு அறிவிக்கிறான்.

வந்திக்கிழவி எனும் ஒரே ஒருவள் மட்டும் வீட்டிலும் யாருமில்லாமல் இருக்கிறாள். சிவபெருமானே ஓர் இளைஞன் வடிவில் வந்து வந்திக்கிழவிக்கு வேலை செய்கிறான். அவள் கொடுத்த புட்டை அளவுக்கு அதிகமாக உண்டதால் தூங்குகிறார் சிவபெருமான். கோபம் கொண்ட அரசனின் கூலியாளைப் பிரம்பால் அடித்தான். கூலியாளோ ஒரு கூடை மண்ணை உடைப்பில் கொட்ட அது மாயமாகச் சரியாகிவிட்டது. சிவபெருமான் குரல் அசரீரியாய் கேட்டது. வாதவூர் பொருட்டு இத்திருவிளையாடலை யாம் செய்தோம். இந்தவாதவூரர் தான் மாணிக்கவாசகர் ஆனவராவார்.

புறப்பொருளில் மரங்கள்

நமது முன்னோர்கள் மக்களின் புறவாழ்க்கையோடு மரங்களை இணைத்தனர். போர் மேற்செல்லும் பொழுது படைவீரர்கள் தங்களுக்குரிய அடையாளப் பூமாலையைத் தலையில் சூடிக் கொள்வர். வெட்சி, வஞ்சி, உழிஞை, தும்மை, வாகை போன்ற பூமாலைகளை அணிந்து கொள்வர் முடிகெழு வேந்தர் மூவரும் முறையே பனை, ஆர்த்தி, வேம்பு ஆகிய பூமாலைகளை அடையாளமாக சூடிக்கொள்வர். இதனால் குடிமகன் முதல் அரசன் ஈறாக அனைவரும் மரங்களைப் போற்றியிருப்பதை நன்கு அறியலாம். பண்டைய அரசர்கள் ஒவ்வொருவருக்கும் காவல்மரம் என்று ஒன்று உண்டு. அந்த இனமரத்தை அந்த மண் மக்கள் வெட்டுவது இல்லை. அது ராஜதுரோகம் என்று நினைத்தனர்.

நிறைவுரை

மரங்கள் மனிதனுக்கு விறகாகவும் எரிபொருளாகவும், வீடுகட்டவும், உரமாகவும், சுற்றுசூழலைக் காக்கவும் பயன்படுவதால் உறவாக கொண்டு விளங்குகிறது. போதி மரத்தடியில் புத்தரும், குறுந்த மரத்தடியில் மாணிக்கவாசகரும், புளியமரத்தடியில் நம்மாழ்வாரும் ஞானம் பெற்றனர். மரங்கள் புறவாழக்கையோடு மக்களுக்கு எவ்விதம் பயன்பட்டன என்பதையும் அறிய முடிந்தது.

AUTONOMY FOR INSTILLING QUALITY CONSCIOUSNESS IN ACADEMIA

Dr G.C. Abraham
The American College, Madurai-625 002, Tamilnadu

Abstract

Indian education in the wake of LPG context and increasing inclination towards disinvestment by ht estate is poised for a challenging situation. With benevolence and concerns for common good fading in the market world, there is risk that it would flatter and fall a prey in the hands of private agencies that are with profiteering interest. Self actualization and aesthetic self expression, subscription for common good and empowerment of self and society are the ideals that were guiding colleges and universities in the past. The fact that these values are subjective has given room for individuals and institutions to make claims and counter claims. In the cutting edge global competition even ideas which are not digital and measured quantitatively cannot be authenticated and sold. Therefore there is need that self actualization will have be measured in terms of skill development, empowerment in the form of fitness for employment, and the self expression to be judged in terms of IQ and EQ. while this shift cannot be expected to realized with generalized top down academic governance, provisions for lateral learning and shared educational administration is presented as alternatives. This paper attempts to investigate if college autonomy can effectively used to achieve results in instilling quality consciousness in academic circles.

Introduction

Education should be and ought to be a demystifying experience. From the mundane process of mere augmentation of ideas, educational process must be elevated to guide the learner into a polite but strong, competent, reflexive and empowered individual. Self-actualization gained in the course of study should make the taught an inquisitive learner who would learn for life, and learn from life. Learning changes with time and a good learner will remain steadfast in values and principles internalized during the study process. Quality education must make an individual open to new ideas and progressive thoughts. Smart learning must stimulate the learner and make him/her transform into leadership roles that are needed for the emancipation of self and society (Senge, 1990). Good education should work for this. Our educational strategies should be sound enough to compete with global peers and benefit from the newer spaces and opportunities that are emerging. It must help to see life with optimism. Quest for knowledge is indispensable for survival in all forms life. Instincts and experiences will make one to learn and the formal process of transferring the learning experience to

others is termed education. Education changes human existence from a mere survival to meaningful survival. The process of education has constantly undergone changes in the realm of history and the need for more radical changes is impending now. As in other fields, globalization liberalization and marketization have impacted incisive influence on education too. The world shrunk by technology and connected by trade and commerce constrains as well as unfolds options. Competing cross-cultural influences render nations and societies borderless and boundary less on one side and get the whole world connected as a global village on the other. Although contemporary developments open up way for instant and enormous learning, it must be realized that the opportunities are evenly open for all (Senge *et al* ., 1994).

The Changing Scene

Advances in communication technology have in a way obscured political and geographical identities and have penetrated even the most rigid and conservative societies. There is no doubt that Internet and Web based learning have revolutionized the information retrieval and data collection. Teachers are no more the only source of information. In this new pretext, the role of a teacher in a class room will have to be revisited. Younger generation, being digital natives, handle data acquisition with unimaginable speed and ease, demanding elders who are digital migrants to cope with advances in the cyber world. This means that there is a need for the faculty to outlearn their wards. However in no way it suggests that teachers are at a loss and teaching has gone wary and irrelevant. Machines can never replace mind. Knowing that data *per se* which has no relevance is only heaping junk, teachers should prevail upon their students to help them surf web with correct searches to enable them gain mastery in the discipline of their study. Good faculty must challenge students and also should assist them in the knowledge pursuits.

Having said that educators continue to hold the key in shaping the young mind and scripting the destiny of nation, the arrangements made in imparting education may be reviewed. Rote memory can no longer be a measure of scholarship. The object of learning and learning outcome should be clearly spelt out from the primary stages to the tertiary level of education. Methods of knowledge transactions will have to be examined with all seriousness. Tertiary education around the world is in such competitive mode that for effective knowledge sharing, the pedagogical approaches must be made quite unique, but comparable, compatible and comprehensible. Though modern education will have to be global in orientation and outlook, its relevance and focus cannot ignore local contexts (Stella and Bhushan, 2011). Teachers should be proactive, persuasive and tolerant. Their ideas will have to be long-sighted and far-fetching. They should know to interpret the existing conditions that the learning

experiences they create might be creative, contemporary and meaningful in stirring the imagination of taught.

The Experience of Academic Autonomy

Educational environment has to be stimulating for knowledge acquisition to cater to whole person development. Writing syllabi, packaging of course work (curriculum planning) and making right choices and plans to disseminate knowledge through appropriate teaching-learning (TL) process form the core activity of an academia. College autonomy makes the difference right here. Moving away from the customary role of teaching courses following instructions prescribed elsewhere, autonomous institutions are expected to be proactive to make strong impressions. NAAC accords a great emphasis to these two criteria in its evaluation (Stella and Gnanam, 2003). Outcome of learning has to be tested appropriately and continuously. Therefore it is suggested that the classroom experiences are ably supported by a judiciously designed testing and evaluation processes. Here again the teachers and the college needs freedom. This being the fulcrum of activity, testing processes must be made student friendly but kept uncompromising.

Teachers should endear themselves to give students an examination experience that would serve as an opportunity for self check to gauge their own progress. Both teachers and students should assess as to how much of their efforts have been fructified in internalizing ideas learnt. Each test performance should make the gray areas known so that further augmentation is done cogently with focused follow-ups. Instead of squarely being judgmental by finding fault on the student's ability to cope and comprehend, teachers should enable their wards to pick up cues for more specific and positive ways to fortify themselves further. It is desirable that the faculty consider the experience of setting up the question papers and assessing student's performance as an opportunity given to them to see how much he /she had been personally productive in delivering goods in class room.

Honestly from every slip of the student's performance a good teacher will learn. A new know-how to teach the same concept differently will be developed after each sloppy performance. Every test, evaluation experience and the inference made from the analysis of result is a feedback. Review is a preparatory process for a new TL plan. Therefore test, exams and evaluation should not been as treated as an end custom of the pedagogical process. Rather it must be considered as a rare and unique chance to sense the undercurrent to equip and plan for the next pedagogical cycle. While end semester result analysis can be seen this way, mid way testing and quizzing done as part of CA (continuous assessment) is an immediate opportunity given for a teacher to consolidate and perfect his/her TL strategies.

In the scheme of things ensuing Kothari's recommendation, Universities and Colleges were allowed with extra privileges and administrative freedom from the state. Under the design of college autonomy, the rights, liberties and privileges said above has been in turn transferred from the university to the colleges. College autonomy is fostered with only minimal overseeing by the university. Trust and teacher integrity is the hallmark of success. Credible performances need no over watching. It is with such higher virtues and expectations that the conventional hierarchical arrangement of the university prevailing over every single function of the college is relaxed.

Need for Lateral Inputs

The yesteryear top-down model of academic governance directed by the university gives no scope for local modifications therefore there is only limited room for any path breaking approaches. In the university controlled pedagogy, there is hardly any feasibility of scripting and modifying syllabi giving priority to the local community concerns and needs. Conversely in autonomous institutions pedagogy can be made need-based, student centric and context oriented. The teacher in an autonomous can wield more power to bring in local variations to invoke community involvement and student interests. Reposing faith in the trust granted under the coveted status of college autonomy, leading institutions are able to accomplish novelty in the design and execution of the work they do.

It is expected that in the autonomous mode of functioning, college shall bring in fresh air in curriculum design, teaching and learning as and when needed. In fine-tuning activities in accordance to the expectation and to diversify co-curricular and extracurricular activities, local sensitivities are to be addressed and understood. Peripheral demands give the BOS and Academic Council an idea on what is needed and expected in terms of outputs from the institution. Under the said formal procedures of planning, new elements are bought into the syllabus can be validated and upgraded. The conventional ways of administering all constituent colleges by the university with *one fit for all design* gives no space for all this. With no ferment there could only be stereotyping.

Each college which has a purpose and reason for its existence will have to ramify its programs to meet the specific needs of its clientele. The arduous delay and cumbersome process of receiving orders of approval from the parent university at every stage of planning and decision making will only dampen enthusiasm. An arrangement where an institution is expected to receive orders from the higher bodies to run its day to day affairs of administration shall not be tenable to infuse enthusiasm, creativity, vibrancy and relevance. Scope novelty, and the ability to transform according to the demands and expectations, can come up only with a strong will. To scale-up for

excellence one needs freedom. With quick changing priorities and ever increasing demands for lateral growth, the need for the freedom increases manifold and therefore autonomy is the only option.

The modus operandi in the formal pedagogical process that operates with a conventional term of reference normally does not allow modifications in planning and execution. Though in autonomy could permit this, it is important that regular and professional monitoring and reporting should be done for effective implementation. Lateral sharing of responsibilities and decentralization of power is much needed for all this. Delegation of work warrants a clear frame of reference and apt time-bound reporting. It is necessary draw a clear line to strike a balance between liberties with responsibility. Freedom must be not be taken for granted. It should be slated and stated with accountability. The traditional arrangement of the university controlled academic regulation will hardly provide a learning that would address and relate to the local needs.

Liaison

Planning, missing the context is no planning. The charge and criticism leveled that both the colonial educational design borrowed off-shore in the colonial times in the past and that the too narrow super specialization recommended in the recent times have failed to deliver goods is not completely out of merit. Too rigid training given to the learner restricts him/her to find utility in the native context. Education which should be seen as an instrument of change, a change for better, must not be alienating the learner from his own natural setting. Scope of education is not merely the acquisition of cognitive abilities. A process which fails to empower individuals to transcend discriminatory divides and that which is short of grooming a value-based and principle-centered decision maker is of no use.

For an admirable and successful outcome, learning experiences must be made personalized. Along with building aptitude to acquire knowledge, students should be allowed to delve deeper to develop skills to acquire higher order abilities. It is precisely for this modern education calls for the impetus on research and extension (Sharma, 2014). Intense academic research in the chosen domain focusing on new knowledge acquisition is of immense help. Field and community studies, market exposure, industrial experience, service learning and internships will form a tool for research. All these related experiences can come only from a personal involvement and *on-site* exposure. Tie-up and institutional partnerships can cater to this. Networks and liaison established through MoU's will offer the needed inputs for the research context.

Active company tie-ups and direct market links made available with special provisions. Such initiatives are enable and embed rich experiences of direct learning

from day to day life. Integration of lateral inputs caters to new knowledge and care must be taken to create platforms would use this resultant data. Provisions should be made to integrate the emerging information in the preparation of syllabi and active course work. Pedagogical processes that feature academic study, research and extension, and that which has provisions for freedom, flexibility and innovation with no compromise on quality, integrity and accountability ensures great schooling.

With benevolence and philanthropic attributes fading, it becomes twice important for an academia to be conscious enough not to be carried away by profiteering ventures. The need to provide an education which is much intense and demanding than in past makes colleges and universities focus on a pedagogy that will provide for vocational, emotional and professional guidance. Besides meeting the cognitive, affective and psychomotor based skills that were conventionally expected to be imparted, collaborations and partnerships notched will be able to provide a robust and unique experience of learning. Therefore colleges and universities today are encouraged to find partners from peers, industries and other agencies to develop their own networks and consortia.

Client Response and feedback

Lateral connectivity of colleges and institutions that had almost becoming an order of the day has its own advantage and limitation. Links and loops formed without fixing appropriate terms and frame of reference are likely to end up in mismatches. To avoid this and to make the networks evenly beneficial, working and vibrant, proper client responses and feedbacks are needed. Evaluating reviews, formal and informal feedback have be promptly done with the present and past students, senior alumni, industrial partners, peers, socially responsible individuals and well wishers are important go judge the undercurrents. Feedbacks are needed to strengthen and tighten the plan-progress-follow-up loop. It becomes absolutely important to match the output with expectation.

The changing world order demands dynamism and freshness of ideas and approach and strategies as well. Therefore directives for development must be picked from inputs gathered from peripheral sources and this is required for a foolproof bottom-up approach. Management of the academia and the academic process in this fiercely competing, globally knitted situation is essentially balancing act (Tithe, 2004). It is important that from contrasting approaches and the conflicting styles of functioning, lessons should be learnt to chisel development.

Table: 1 Domains and options for propelling quality consciousness

Domains in Management	Approaches	Remarks
Management Strategy and Philosophy	Short term vs. Long term	*The long term object of institution, its quality and the vision–mission statements must be whetted, internalized and translated into doable short term work plans with achievable targets*
Decision Making	Reason vs. Intuition	*Expertise, resources and limitations should be professionally and pragmatically analyzed to reason out ways and means to convert the strategic directive into clear plans and projects*
International Appeal	Standardization vs. Customization	*In showcasing excellence institution must not over look its relevance and therefore the thought and the act should be global, local as well as glocal*
Structure	Centralization vs. Decentralization	*Delegation of power and authority is to be ensured by putting in place proper checks and balances, accountability and time-bound reporting*
People management	Autonomy vs. Control	*Personal integrity, proactive engagement, trust and mutual respect should decide the credibility and integrity of system and functions*
People skilling	Specialization vs. Generalization	*Professionalism ensuring conceptualization embedded with rationalism and follow-up actions should be accorded priority in both*
Culture	Assimilation vs. Diversity	*An appreciation of unity in diversity should be given due attention to ensure inclusiveness and equity*
Leadership	Task Focus vs. People Focus	*Principle-centered governance recognizing creativity and contributions that comes in terms of human effort and the terms of references drawn for sharing of responsibilities holds the key*
Corporate Citizenship	Private Good vs. Public Good	*Emphasis on Synergy and Benefit Sharing will negate greed and draw close the sustenance of system that the developmental initiative can transcend beyond parochial and monetary considerations*

Dealing with Quality Concerns

Trade liberalization and international benchmarks set under GATS for industries and market have slowly been absorbed by institution in the education sector. With increasing trends in liberalization, privatization and martektization, quality had emerged as the watch word. Quality education is the only solution for sustenance and growth. Work done on academic campuses will have to be necessarily meeting the job needs of the individual. In demanding skill development which is a personal accomplishment, a call is given to strengthen HR which is of social and national concern. Colleges should be able deliver goods in terms of qualifying individuals for employment and entrepreneurial engagements. Mounting challenges heightens expectations.

Quality concerns in HEI's revolving around (i) Critical thinking, (ii) Digital awareness, (iii) use of sustainable and safe technology, (iv) Cost competitiveness guaranteeing quick learning strategies, (v) the reiterated demand for innovation and creativity with control over contemporary situations, and (vi) professional references for the sustainability of the work environment will have to be built into the program. Though some institutions have carved a name for they are ahead of others in this context, it becomes necessary for all colleges to address these. In the cutting edge competition between institutions it is but natural that each one wants to be about their own plans and strategies. But what is needd3d in the long run is mutual trust and cooperation and therefore it is necessary that institutions are coming forward to compare notes with each other. For it is quite interesting to see colleges competing with each other making diverse claims about their achievements are coming forward to work together as part of consortia and networks in offering good quality academic programs. Though each college has its own design and strategy, many inter institutional programs, twinning programs and transnational exchange programs are being launched in many institutions. Colleges that have built their own repute have already made headway in this. Under autonomy, colleges use the academic freedom given to them to experiment such newer initiatives. Effort and time spent in devoting to cater to all round development of the individuals make these institutions special and successful.

References

1. Agarwal, J.C., 1982 Development and planning modern education: with Special reference to India Vikas publishing House 424 pages ISBN 0706915690, 9780706915693

2. Sharon F Cramer, 2017 Shared Governance in Higher Education: Demands, Transitions & Transformation. Volume I, State University of New York Press, Albany 274 pages

3. Thite, Mohan 2004 Managing People in the New Economy *Targeted HR Practices that Persuade to Unlock their Knowledge Power.* Response BOOKs A division of Sage publications New Delhi-Thousand Oaks – London 293 pages ISBN: 0-7619-9836-5 (US-PB)

4. Saha, G. 2016   Total Quality Management in (TQM) in educational institutions, International Educational Research Journal 2(6); 63-64, E-ISSN No 2454-9916

5. Senge, P., Kleiner, A., Ross, R.B. and Smith, B.J. 1994 The fifth Discipline field book: strategies and tools for building a learning organization. Nicholas Brearley : London

6. Senge, P.M. 1990 The fifth Discipline: the Art and Practice of the Learning organization.

7. Random House: New York, NY.

8. Sivaraju, K. and Udaykumari, 2014 A critical evaluation on poverty and poverty alleviation programs in India In: Equality and Sustainable Human Development: Issues and Policy Implementation, K. Shivachithapa and J.L. .D'Silva Ed. 2Lulu enterprises, UK ltd. Pp 381-390

9. Sharma, B., 2014 Sustainable Development through Research and Higher Education in India, *American Journal of Educational Research*, 2014 2 (3), pp 117-122.

10. Stella , A. and Bhushan, S., 2011 Lessons of Experience. *In*: Quality Assurance of Transnational Higher Education. The experiences of Australia and India. Stella Antony and Bhushan Sundhanshu Ed. Australian Universities Quality Agency and the University of Educational Planning Administration 2011

11. Stella , A. and Gnanam, 2003 A., Foundations of external quality assurance in Indian higher education Concept Publishing company, New Delhi 110059 India : ISBN 81-8069-048-2: 233 pages

INDEX COPERNICUS
INTERNATIONAL
IC VALUE : 23.21 POINTS

Shanlax International Journal of Arts, Science and Humanities

I2OR

IMPACT FACTOR
2.95

DA I J
Directory of abstract Indexing for Journals

gaudeamus

Academic Resource Index
ResearchBib

INFOBASE INDEX

GENERAL IMPACT FACTOR