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RETELL

Research Teaching Learning Letters
(An inter-disciplinary Research Journal)

Vol. 20, December 2018

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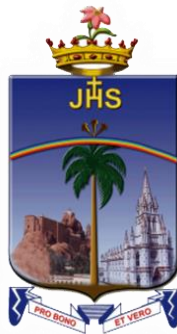
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From the Editors' Desk

Dear readers,

For a decade, the Journal RETELL has been a beacon of inter-disciplinary research. It maintains the highest level of ethical integrity, ensuring consistency and scientific rigor in each of its research articles. Our desire for RETELL is to continue to excel insightfully and to meet the future academic research arena by incorporating outstanding contributions in science and humanities.

It is no secret that the landscape of scholarly publishing is quickly changing. Across disciplines, new demands and expectations from both authors and readers have encouraged shifting perspectives among editors and publishers. The sole objective of RETELL is to ensure that this journal remains flexible in attending to the rapidly shifting scientific communication landscape, by maintaining and intensifying the high standards of academic excellence for which the journal is known. By steadily introducing initiatives to the editorial and review processes, the Journal RETELL will further develop as a flagship for communicating inter-disciplinary research, all while successfully meeting the evolving needs of its audience.

Dr. Y. Justin Koilpillai
Associate Editor

Dr. L. Arockiam
Editor in Chief

Epistle

The Journal of RETELL has emerged in the recent past to cater to the needs of inter-disciplinary with rigorous research outcomes and analytical papers. The aim of the journal is to disseminate knowledge in a significant manner to the field of inter-disciplinary and its total functionality.

RETELL is a right platform for academicians, industry executives, researchers and students to share the views and knowledge in the field of inter-disciplinary by providing research papers, articles and case analysis, reviews etc. I congratulate the Editorial Board for bringing out the 20th volume with good quality papers that will enhance the depth of knowledge treasury. I am firm about the ensuing issues of the journal with regard to quality and coverage. I wish RETELL will continue to promote academic ambience among the researchers in the days to come.

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Anti-cancer Activity, Isolation and Characterization of Terpenoid from the Ethanolic Extract of the Medicinal Plant *Pavetta indica* Linn.

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Abstract

In this study, the ethanolic extract of plant *Pavetta indica* Linn. showed a significant anti - cancer activity on Tryphan blue dye exclusion assay. The phytochemical analysis reveals that to isolate Terpenoid type of compound from the plant by using benzene, acetone and toluene buffer mixture. Characterization of the compound by using chemical and spectroscopic methods.

Keywords: *Pavetta indica* Linn, ethanolic extract, isolation, anti-cancer activity

1. Introduction

Cancer cells usually invade and destroy normal cells. These cells are produced due to imbalance in the body while correcting this imbalance, the cancer may get treated. Ayurveda is the traditional Indian medical practices that use plant drugs successfully in use of natural drugs results in preventing or suppressing various types of tumours and cancers.^[1] The synthetic anticancer remedies are found to be high in cost due to the expensive synthetic methodology to use herbal medicines (in the prevention and treatment of many cancerous diseases) they are comparatively economical^[2]. *Pavetta indica* Linn.^[3, 4] (Tamil: *Kattu thirani*, *Panna pavadai*, *Sirukonnai*, *Pavattai*) is a shrub or small tree belongs to the family of Rubiaceace. It comprises about 350 species of trees, evergreen shrubs and sub-shrubs. It is found in woodlands, grasslands and thickets in sub-tropical and tropical Africa and Asian Countries.^[5] The leaves very variable elliptic – oblong to elliptic – lanceolate and obovate – oblong, glossy – green flowers are white. The roots are said to possess purgative, aperient, diuretic and tonic properties and are prescribed in visceral obstructions, jaundice, headache, urinary diseases and dropsical affections. The phytochemical investigation^[6], chemical composition of essential oils^[7] and physio-phytochemical screening^[8] had been reported in this plant. The plant was studied anti – inflammatory potential^[9], analgesic^[10], antimicrobial^[11], antipyretic activities^[12], anti-oxidant^[13], anti-

diabetic^[14], hepato protective^[15], anthelmintic^[16] and wound healing activities^[17]. Linoleic acid, (9z, 12z, 15z)-octadeca-9,12,15-trienoic acid, proanthocyanadin, epicatechin and ferulic acid^[18]. The compounds Chlorogenic acid, Ferulic acid, Salicylic acid and Oleic acid^[19] were isolated and characterised by chemical studies from this plant. The present study aims to isolate and characterise the alkaloid type of compound from the ethanolic extract of the plant *Pavetta indica* Linn. It also focuses on the anti-cancer activity of the crude extract.

2. Materials and Methods

The leaves of *Pavetta indica* Linn. were collected from Narthamalai region (Near Pudukkottai District) from the month of July at 11:00 a.m. They were identified and authenticated by Dr. S. Soosairaj (SJCBO 2474), Assistant Professor, Department of Botany and with Rapinet Herbarium, St. Joseph's College, Tiruchirappalli, Tamil Nadu, India.

2.1 Sample Preparation

The leaves of *Pavetta indica* Linn. were shade dried and powdered well. About 20g of the plant leaves were soaked in 100 mL of ethanol. It was left for 24 hours in order to extract the phytoconstituents- alkaloids, carbohydrate, tannins, steroidal glycosides, steroids, flavanoids, acids and others. The extract was filtered using Whatmann No.1 filter paper to remove the residues.

2.2 *In vitro* Anti-cancer Activity^[20-24]

Trypan blue exclusion method: Trypan blue is an azo dye that is used as a dye-stuff in anti-cancer activity studies. It is used as a vital stain to selectively colour of dead tissues which get stained to become blue cells. Live cells or tissues (having intact cell membranes) are not coloured.

Trypan blue dye assay method was carried out to evaluate the *in vitro* cytotoxicity potentials of the ethanolic extract of the plant *Pavetta indica* Linn. Using the ethanolic extract of the plant, different concentrations - 10, 20, 50, 100 and 200 µg/ml with distilled water were prepared. In a test tube, 100 µl of plant extract was mixed with 800 µl of phosphate buffer saline and 100 µl (1×10⁶ in 1 ml) of Dalton's Ascitic Lymphoma (DAL) was added. Each concentration of the extract was tested in triplicate. All the samples were incubated at 37°C in an incubator for 30 mins. About 100µl of trypan blue dye (0.4%) was added to each of five different test tubes (which contained extracts in five different concentrations) and the number of blue-coloured dead cells and the colourless live cells were counted in a haemocytometer under the microscope. Percentage of cytotoxicity was calculated by the following formula:

$$\text{Cytotoxicity (\% of dead cells)} = \frac{\text{No. of Deadcells}}{\text{No. of Livecells} + \text{No. of Deadcells}} \times 100$$

Dalton's Lymphoma Ascites (DLA) was maintained in Amala Cancer Research Center, Thrissur, Kerala, India. The cells were maintained *in vivo* in Swiss albino mice by intraperitoneal administration.

2.3 Isolation and Characterization

The above ethanoic extract is concentrated further by distillation. The chlorophyll present in the concentrated extracts was removed by treating with 4 N dil. H₂SO₄ at 60 °C on a water bath for 30-45 min and filtering it. The ethanoic extract was treated with 4N HCl. The homogeneous solution was further extracted with ether, labelled as ether layer-I. The resulting aqueous layer neutralized with 10% NaOH. Then it is again extracted with ether to get ether layer-II. The micro TLC is done using the plate (7.5 cm × 2.5 cm) coated with 100 micron silica gel (0.2 g/plate) as stationary phase and using suitable eluants. The compounds separated are noted down. The details of the micro TLC are given in the following Table-1.

Table-1: Details of the micro Thin Layer Chromatography

Extracts	Eluents	No. of compounds separated
Ether Layer-I	Benzene : Acetone (4:1)	2 (PIC ₃ , PIC ₄)
Ether Layer-II	Chloroform : Acetone : Toluene (4:8:8)	2 (PIC ₁ , PIC ₂)

The preparative TLC^{25,26} carried out using the plate (20 cm × 20 cm) coated with 100 micron silica gel (5 g/plate) and suitable eluant as given in the Table-1. The components separated as bands are isolated by extraction using Chloroform from the silica gel. The isolated components are purified by recrystallization using ethanol. Of the several components, the PIC₃ is taken for characterization as it is in large quantity (500 mg). The solubility of the compound (m.p. **** °C) was tested positively in solvents- in chloroform, benzene and acetone. It decolorized bromine in alcohol indicating the presence of unsaturation. 0.5 ml of extract was dissolved in 1ml of chloroform. The mixture was treated with Conc. H₂SO₄. It gave red coloration and also it shows positive response with chromic anhydride signifying the alcohol functionality. It burns does not burns with a long sooty flame indicating the aliphatic nature.

The molecular mass of the substance (PIC₃) was calculated to be 288.47 by the cryoscopic method using camphor solvent^[27]. The UV-VIS spectrum was taken on the spectrophotometer, Lamda 35 model using spectroscopic grade ethanol. The FT-IR spectrum was recorded using the instrument Perkin-Elmer RXi spectrometer by KBr pellet method. The proton NMR and ¹³C NMR spectrum of the compound were taken on the 300 MHz Bruker model spectrometer using CDCl₃ solvent and TMS standard. The GC-MASS spectral study of the

compound was done using spectrometer Shimadzu U Japan. The data are shown in the Table-2.

Table-2: The Spectral data of the compound

Spectroscopy	Experimental Data of the compound
UV-VIS Spectroscopy (λ_{\max} , nm)	198 (ϵ 10400), 217 (ϵ 48000), 249 (ϵ 16000), 230 (ϵ 630), 312 (ϵ 3500)
IR spectroscopy (ν_{\max} , cm ⁻¹)	744, 906, 911, 929, 1018, 1198, 1371, 1394, 1448, 1375, 1381, 1448, 1453, 1469, 1649, 1656, 2846, 2853, 2863, 2872, 2915, 2924, 2941, 2958, 3614
¹ H NMR spectroscopy (δ ppm)	0.961s(3H)J 5Hz, 1.008s(3H), 1.217d(2H)J11.1, 7.1Hz, 1.398d(2H)J9.1, 6.2, 5.4Hz, 1.498d(2H)J11.1, 7.1Hz, 1.693t, 5.863d(1H)J 8.3, 2.6 Hz, 5.991s(1H), 3.206d(1H)J11.1, 7.3Hz, 4.381s(1H)
¹³ C NMR (δ ppm)	17.72, 18.79, 19.24, 28.97, 37.61, 43.18, 44.01, 46.01, 47.81, 62.23, 63.93, 75.79, 79.25, 109.18, 118.72, 120.33, 147.59, 148.18,
Mass spectroscopy (m/z values)	15.03, 17.01, 28.05, 30.07, 42.08, 42.08, 43.09, 68.07, 70.09, 104.15, 110.15, 133.21, 140.22, 142.19, 187.30, 245.38, 246.39, 258.40, 271.46, 273.43, 288.47, 374.60, 546.86.

3. Results and Discussion

3.1 In Vitro Anti-cancer activity

Table-3: Results of anti-cancer activity of ethanolic extract of *Pavetta indica* Linn.

Drug Concentrations (μ g/ml)	Percentage of Death cell (DLA) (%)
	Ethanolic extract of the medicinal plant <i>Pavetta indica</i> Linn.
10	0
20	2
50	7
100	14
200	30

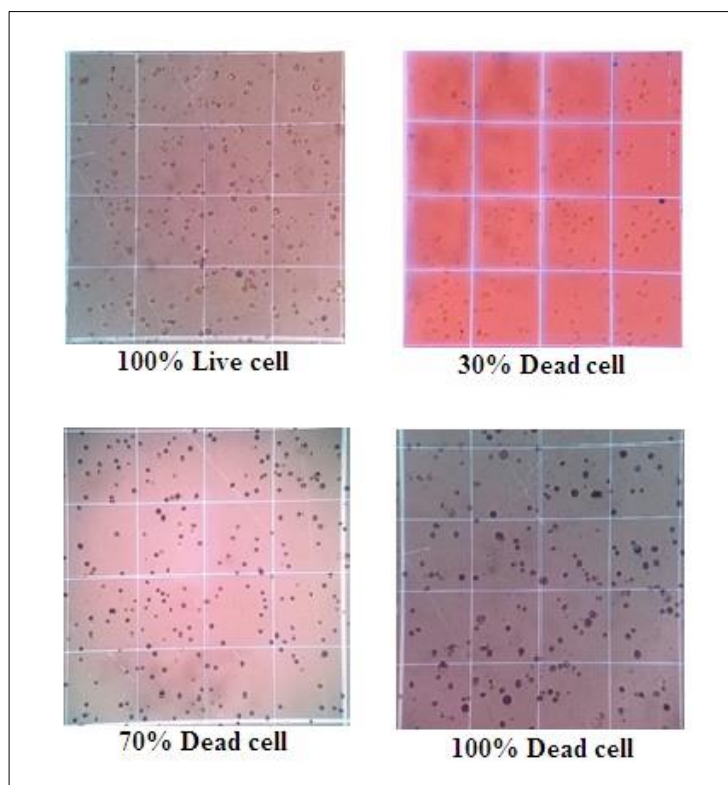


Fig. 1: Anti cancer activity of ethanolic extract of *Pavetta indica* Linn.

The results given above the table showed the anti - cancer activity for the various concentrations (10, 20, 50, 100, 200 $\mu\text{g}/\text{mL}$) of ethanolic extracts of the medicinal plant *Pavetta indica* Linn. It is observed that the plant extract of concentration at 200 $\mu\text{g}/\text{mL}$ has a higher inhibition activity against cancer cells.

3.2 Isolation and Characterization^[28, 29]

The isolated compound was purified and recrystallized out using ethanol. It was a pale yellow solid (m.p. 260-262 $^{\circ}\text{C}$ and molecular mass 288.5). It was soluble in polar solvents like chloroform, acetone and ethanol, *etc.* By the tests with bromine in alcohol, indicating the presence of unsaturation. It showed a positive response with hydroxamic acid, by giving red coloration indicated presence of amide functional group and also it shows positive response with chromic anhydride signifying the secondary alcohol functionality.

Table-4a: Interpretation of UV- VIS Spectral Data

Chromophore	Electronic transition	Band at wavelength (nm)
	$\pi - \pi^*$	E-band 198 (ϵ 10400), 217 (ϵ 48000) indicating the presence of C=C double bond of ethylenic chromophore

Table-4b: Interpretation of Infra-Red Spectral Data

Band at frequency (cm^{-1})	Vibration	Type of Bond
Weak 3614 Strong, Broad Medium 1198	Stretching Stretching Bending	O-H free (Hydroxyl group) O-H free (H bonded) Intra molecular O-H group
Strong 1018	Bending	C-O bond
Strong 2863, 2872, 2941, 2958, 744 Medium 1375, 1381, 1448, 1453 Strong 2891 Medium 929, 1371, 1394	Stretching Bending Stretching Bending	C-H of CH_3 C-H of CH_3 C-H of CH_3 C-H of CH_3
Weak 3051, Strong 3048 Medium 1649, 1656 Strong 906, 911 Strong 2853, 2924 Strong 2846, 2915 Strong 1448, 1469	Stretching Stretching Bending Stretching Stretching Bending	C=C-H of ring C=C of ring C-H of ring C-C-H of ring C-H of CH_3 C-H of CH_3

Table-4c: Interpretation of Proton NMR Spectral Data

Chemical shift Signal pattern (Number of protons)	Environment of the Protons	Type of protons
0.961 ppm singlet (3H) J 5Hz	Slightly shielded protons of methyl group one neighboring proton	-CH ₃
1.008 ppm singlet (3H)	Less shielded proton in methyl part with no neighboring proton	-CH ₃
1.217 ppm doublet (2H) J11.1, 7.1 Hz	Markedly shielded proton in methylenic part with three neighboring proton	-CH ₂
1.398 ppm doublet (2H) J 9.1, 6.2, 5.4 Hz	Observably shielded methylenic proton. Three neighboring proton	-CH ₂
1.498 ppm doublet (2H) J11.1, 7.1 Hz	Remarkably shielded methylene environment with three neighboring proton	-CH ₂
1.693 ppm triplet	Slightly shielded proton environment. Three neighboring proton	-C-C-
5.863 ppm doublet (1H) J 8.3, 2.6 Hz	Deshielded proton attachment with π -electron system with two neighboring proton	-C=C-
5.991 ppm singlet (1H)	Markedly deshielded proton due to the attachment with π -electron system with no neighboring proton	-C=C-
3.206 ppm doublet (1H) J 11.1, 7.3 Hz	Significantly deshielded by the attachment of electronegative oxygen atom to methylenic carbon. Two neighboring proton	-CH-O
4.381 ppm singlet (1H)	Markedly deshielded by the attachment of the electronegative oxygen atom with no neighboring proton	-OH

Table-4d: Interpretation of Carbon - 13 NMR Spectral Data

Chemical shift (ppm)	Environment of the Carbons	Type of Carbon
17.72, 18.79, 19.24	Observably shielded carbon in methyl part	-CH ₃
28.97, 37.61, 43.18, 44.01, 46.01, 47.81	Slightly deshielded carbon in Methylene group	-CH ₂
62.23, 63.93, 75.79, 79.25	Markedly deshielded by the carbon in methylenic part	-CH
147.59, 148.18, 118.72, 120.33	Carbon in highly deshielded environment due to the attachment in π -electron system.	-C=C-
109.18	Highly deshielded carbon due to attachment with more electronegative oxygen atom	-C-O

Table-4e: Interpretation of HMBC data of the compound

	5.991s 1H	5.863m 1H	4.381s 1H	3.206m 1H	2.301m 1H	2.287m 1H	2.011m 2H	1.996m 1H	1.693m 1H	1.493m 2H	1.398m 2H	1.217m 2H	1.008s 6H	0.982s 3H	0.961s 6H
17.72				β					β				bond		
18.79					β				β			β		bond	
19.24						α									bond
28.97					α		α				bond				
37.61				β	β				β	α		bond		β	
43.18			β	α						bond		α			
44.01	β				β	β	bond				α				
46.07		α						bond	α			α			
47.81	β					bond	β								α
62.23					α			β	α	β	β	β		α	
63.93			β	α				β	α					α	
75.79	β	β			bond		β		β	β	α	β		β	
76.82		β		β	β			α	bond				β	β	
109.18			α	bond					β	α		β	β		
118.72	bond	β			β	β	β		α	β					
120.33	β	bond			β			α	β						
147.59	α	α			α				β		β				
148.18	α					α	α				β				β

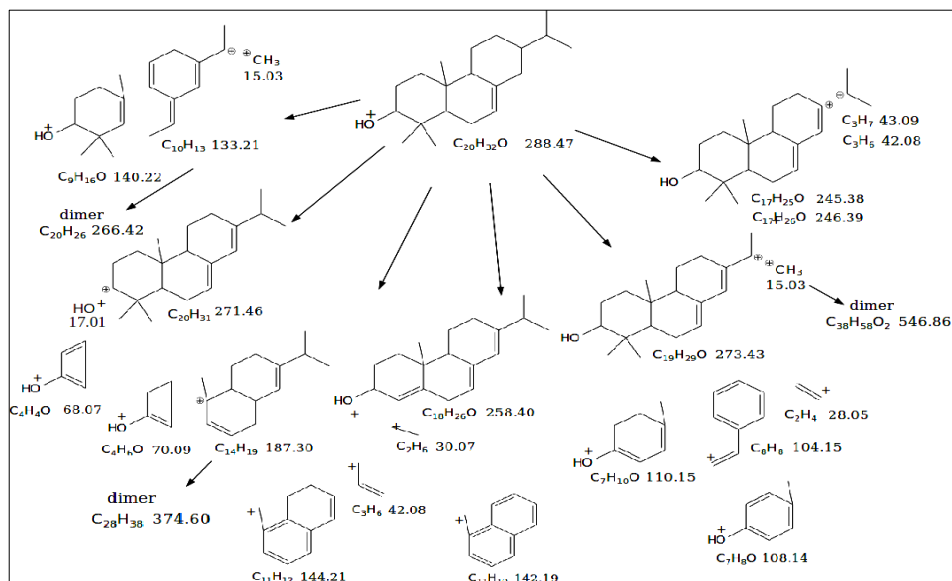
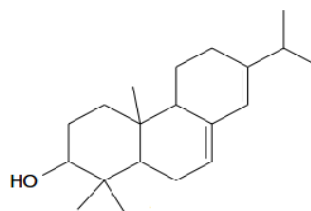


Fig. 2: Mass spectral Fragmentation Pattern of the compound - PIC₁

Conclusion

The Anti-cancer activity of ethanolic extract of the plant *Pavetta indica* Linn. showed the higher concentration (200 µg/ml) had a higher inhibition activity against cancer cells. The characterization study on the phytoconstituent PIC₁ involving UV, IR, H-NMR, C13-NMR and Mass spectral studies revealed the presence of terpenoid type of compound. The final aspect of the structural characteristics of PIC₁ was understood from the HMBC Correlation studies. Thus, the structure of the compound is deciphered to be a quinolone type of compound and the tentative structure is proposed, as shown here.



References

1. Balachandran P, Govindarajan R. Cancer - An Ayurvedic Perspective, *Pharmacological Research*, 2005, 51, 19-30.
2. Tapsell L.C, Hemphil I, Cobiac L. *et al.* Health benefits of herbs and species: the past, the present, the future. *Medical Journal of Australia*, 2006; 185(4), S4-24.

3. The Wealth of India. *A dictionary of Indian raw materials and industrial products, Raw material*. Publications and information Directorate, CSIR, New Delhi. 1951; (2): 282-283,
4. Bur Kill H M. *The Useful Plants of western tropical*. 1985; (4), 2nd edition.
5. Kirtikar K R and Basu B D. *Indian medicinal plants*, (1987) 2nd edition, Vol II, 1290-1292.
6. Ramamoorthy J, Venkatramanan S, Meena R, Devi A P and Satkar Prasad. Phytochemical investigation of *Pavetta indica* Linn. *Indian Journal of Chemical Science*. 2011; (9): 397-402.
7. Prasad K, Moulekhi K and Bisht G. Chemical composition of the essential oil of *Pavetta indica* Linn. L leaves. *Research Journal of Phytochemistry*. 2011; (5): 66-69.
8. Ramamoorthy J *et al*. Physio-Phytochemical screening and Diuretic activity of leaves of *Pavetta indica* Linn. *Journal of Pharmaceutical Science and Research*. 2010; 2: 506-512.
9. Subhash C and Mandal *et al*. Evaluation of anti-inflammatory potential of *Pavetta indica* Linn. leaf extract (family: Rubiaceae) in rats. *Phytotherapy Research*, 2008; (17): 817-820.
10. Golwala D K *et al*. Analgesic activity of Ethanolic leaf Extract of *Pavetta indica* Linn., *International Journal of Pharmaceutical Science and Drug Research*. 2009; (1):119-120.
11. Vinod Kumar Gupta, Charanjeet Kaur, Aritra SimLai and Amit Roy. Antimicrobial activity of *Pavetta indica* Linn. Leaves. *Journal of Applied Pharmaceutical Science*. 2013; (3): 78-82.
12. Lakshmi S, and Mohana *et al*. Antipyretic Activity of *Pavetta indica* Linn. (Rubiaceae) Leaf Extract. Selected Issues in Ethnopharmacology, Division of Pharmacognosy and Phytochemistry, Department of Pharmaceutical Technology. 2009, Jadavapur University, Kolkata-700032, India.
13. Abdul Hameed Thayyil, Kottai Muthu A and Mohammed Ibrahim; Evaluation of in vitro antioxidant activity of various extracts aerial parts of *Pavetta indica* (Linn). *International Journal of Chemical and Pharmaceutical Sciences*; 2015, Dec., Vol. 6 (4).
14. Natarajan P, Thangathirupathi A, Ramarajan S, Jaya S, Bellamkonda Hareesh and Gollapalli Laxminarayana; Preliminary study of antidiabetic activity of methanolic extract of *pavetta indica* linn in diabetic rats. *Asian Journal of Pharmaceutical and Clinical Research*; Vol. 6, (1), 2013, 131-133.
15. Bidyananda Singh N and Saravanan N. The effect of *Pavetta indica* Linn.in CCl₄ induced hepatotoxicity in rats, *International journal of Comprehensive Pharmacy*, 2012, Vol. 3, (06).

16. Satkar Prasad and Anand Chaurasiya. *In vitro* evaluation of Anthelmintic activity of the roots and leaves of *Pavetta indica* Linn. *International Journal of Pharmacy & Life Sciences*, 7(6), June 2016, 5094-5098.
17. Satkar Prasad, Anand Chaurasiya and Ravindra Pal Singh. Evaluation of wound healing activity of leaves and roots of *Pavetta indica* Linn. of different extracts. *International Journal of Innovation in Engineering and Technology*, 2016, Vol.7 (3), 173-177.
18. Murthy J R, Venkataraman S, Meera R, Satkar Prasad and Devi P. Phytochemical investigation of *Pavetta indica* Linn. *International Journal of Chemical Sciences*, 2010; 8(3), 1517-1522.
19. Satkar Prasad, Anand Chaurasiya and Ravindra Pal Singh. Isolation and Identification of compounds from the Root extract of *Pavetta indica* Linn.
20. Dhanalakshmi M, Thenmozhi S, Pradeepti K G, Prabhavathi K and Priyadharshini S. A Review on medicinal plants with Anticancer activity. *International Journal of Pharmaceutical and Biological Archives*, (2017), 8(6), 37-41.
21. Gunji Venkateswaralu, Swarupa Rani T, Vani M, Vineela PAJ. *In vitro* anticancer activity of petroleum ether extracts of *Cynodon dactylon*. *Journal of Pharmacognosy and Phytochemistry*, (2015) 4(1): 164-168.
22. Mohammad Shoeb. Anticancer agents from medicinal plants. *Bangladesh Journal of Pharmacology*, (2006), 1, 35-41.
23. Madhuri S and Govind Pandey. Some anti-cancer medicinal plant of foreign origin, *Current Science*, (2009), 96 (6), 779-783.
24. Swafiya Jahan, Ranu Chaudhary and Pradeep Kumar Goyal. Anticancer Activity of an Indian Medicinal Plant, *Alstonia scholaris*, on Skin Carcinogenesis in Mice. *Integrative Cancer Therapies*, (2009) 8, 273-279.
25. Hostettmann K, Marston A, Hostettmann M. *Preparative Chromatography Techniques Applications in Natural Product Isolation*. 2nd Edition, Berlin, Heidelberg: Springer Berlin Heidelberg. 1998, p. 50.
26. Still W C, Kahn M, Mitra A. Rapid chromatographic technique for preparative separations with moderate resolution, *Journal of Organic Chemistry*, (1978), 43 (14), 2923-2925.
27. Louis F F, *Experiments in Organic Chemistry*, D.C. Heath & Co., Boston, edition. 3, pp. 21-24 (1957).
28. Pretch E, Clerc T, Seibl J and Simon W. *Tables of Spectral Data for Structure Determination of Organic Compounds*, Springer-Verlag, New York. 2 ed. (1989).
29. Dudley H W and Fleming I. *Spectroscopic Methods in Organic Chemistry*. Tata McGraw-Hill, New Delhi, India Edition. 5, (1988).

IoT Based Architecture for Agricultural Farm Monitoring

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Abstract

In the modern world, monitoring the farm is a big challenge to the farmers. Over the past decades, farmers have faced a lot of difficulties due to many farming related issues. The use of advanced techniques in agricultural sector will help to monitor and safeguard the crops with less man power. In this paper, an architectural model is proposed to improve the automatic monitoring of the farms. This architecture is designed to collect weather related data like temperature, rainfall, humidity etc., through various sensors and the images of the leaves with the Help of drones. The collected data is stored into the cloud environment, performs analysis and reports the actual status of the farm. Also, the proposed architecture will help to predict the intensity and spreading pattern of the diseases which are identified through the analysis of the collected data using advanced prediction techniques.

Keywords: IoT, Smart Monitoring, Drone, Leaf Disease

Introduction

Internet of Things is an advanced automation and analytics system which has applications across various industries through its unique flexibility and ability to be suitable in any environment (e.g. Agriculture). The Internet of Things (IoT) is a collection of intelligently linked devices and systems to leverage the data collected by embedding sensors and actuators in machines and other physical gadgets [1]. For this intelligence and interconnection, IoT devices are supplied with embedded sensors, actuators, processors, and transceivers. IoT is not a standalone technology; rather it is a combination of various technologies that work together in tandem. The term "Internet of Things" (IoT) was first coined by Kevin Ashton, who was a British technologist in 1999, in which the physical world objects can be connected to the Internet through sensors [2].

Internet of Things is a technology for interconnecting objects with access. Using Internet of Things technology, "objects" recognize themselves and obtain intelligent behaviour by making decisions [4]. Also, they can communicate information about themselves to other things. With the internet of things, anything will be able to communicate to the internet at any time from any place

to provide any services by any network to anyone. This concept will create a new type of application which includes smart vehicle and the smart home, to provide many services such as notifications, security, energy saving, automation, communication and entertainment [5].

The agricultural industry is totally dependent on innovative ideas and technological advancements to increase yields and profits. There are plenty of compact IoT technologies in Agriculture for finding temperature, humidity, wind speed, soil content, pest infection and rainfall which still exist with many setbacks. As an alternative, in this paper, Drones are used to monitor the farm in a reliable and faster way. This collected data can be used to automate agricultural process and activities, improve quality and quantity, reduce risk and waste, and minimize efforts to manage crops [6, 7]. The need for IoT in agriculture is because of the rise in the need of saving fertilizers and chemical crop protection agents, to control crop state and prevent its loss when stored. It also helps to increase the machinery efficiency, monitor state and locating of farm animals and to track processing line equipment condition.

The challenges of IoT in agriculture are the cost of equipment and the need for wider internet coverage. If these two prerequisites fertilized to the farmers in affordable cost, the farmers in the developing countries will enjoy the benefits of this technology. In this paper, the related works are examined and a novel IoT based architecture for farm monitoring is proposed.

Review of Literature

Daisy *et al.* [8] demonstrated an approach which was useful in crop protection basically in large area farms, and it was based on automated techniques that can identify the diseased leaves by using colour information of leaves. In the first stage, the captured RGB image was converted to grey scale and resized. Finally, the variety of diseases in the leaf and the location of the diseases were also detected using various techniques. This approach was implemented for the early control of disease in early stage and protection from specific diseases.

Malvika *et al.* [9] evaluated the system for diagnosing the disease in the leaf and assisted the farmers for precise judgment. The diseased parts of the leaves were identified by the images captured through drones. As the result of segmentation, Colour HSV features were extracted from the captured images. Artificial neural network (ANN) was used to distinguish between the healthy and diseased samples. The result of ANN classification provided a better accuracy of 80%.

Solahudin *et al.* [10] discussed Gemini virus attack in chilli crop with the help of Bayesian segmentation method. The defected portions of the crop were analysed with the help of images taken from the Earth's surface. The images were captured using the aerial photography through multi-copter. In addition, the Bayesian segmentation method determined the levels of defected crops with a 3-dimensional input colour component such as Red, Blue and Green.

Monzurul *et al.* [11] used image processing and machine learning techniques to determine the cause of plant diseases. The proposed approach classified the diseased images by using image segmentation with support vector machine and 90% of accuracy was earned through this automatic disease detection system.

Lala *et al.* [12] proposed a system for automatic crop irrigation, which monitored various factors like temperature, humidity, wind and water level. Temperature and soil moisture sensor were utilized to measure the factors which were previously mentioned. The received data was transferred to the server by using Global System Monitoring technique. After the prediction was made, the status of the crop was sent as a message to farmers mobiles. The farmers' proposed system was developed with low cost and a new technology.

Sanjeev *et al.* [13] recommended a method using Back Propagation Neural Network (BPNN) classifier to detect plant diseases based on visual symptoms which occur on leaves. The author classified two diseases of pomegranate plant namely Bacterial Blight (BB) and Wilt Complex (WC). Images were captured by digital cameras and were classified as healthy and unhealthy. Furthermore, these images were enhanced and segmented to detect infected portions. BPNN classifier was used to extract colour and texture features to classify the disease, which helped the farmers in effective decision making. The classification accuracy obtained was 97.30%.

Chandan *et al.* [14] developed a system to operate the water motor automatically according to the water requirement. The humidity level was determined through soil moisture sensor and the water motor was turned on/off based on the humidity level. Local Shortest Path (LSP) algorithm was used for controlling the wireless multiple networks between these automatized processes.

Darshna *et al.* [15] proposed a water system for gardens by using sensor microcontroller system. The temperature sensor and soil moisture sensors sent information to the microcontroller which did assessments based on quantity of water required for vegetation. The GSM module was used in order to let the user access the machine through mobile phone.

Newlin *et al.* [16] recommended a solution for detecting and monitoring plant leaf disease automatically by analysing the texture of various types of plants. The diseases were identified at the initial stages. In this research work, though the identification rate was low and the misclassification was avoided based on the symptoms of the diseased plant.

Architecture for Farm Monitoring System

In this section, the IoT architecture for farm monitoring is described. It contains four major phases namely: data collection through IoT devices, data sharing by communication technology, data storing in cloud with internet, processing and data visualization. The phases in the proposed architecture are essential in design of any IoT based application. Figure 1 illustrates the IoT architecture for farm monitoring.

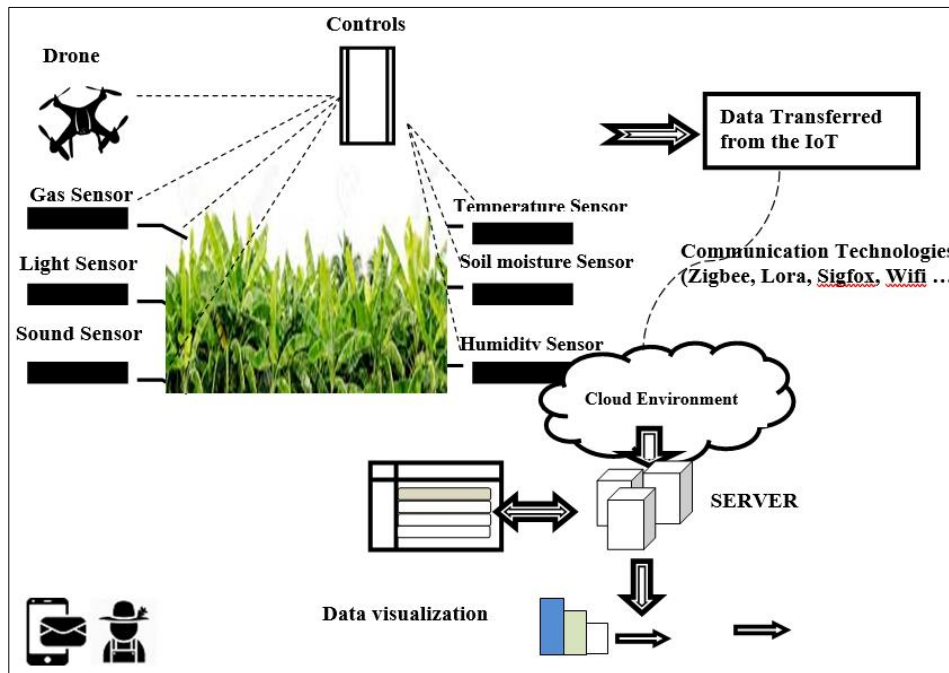


Fig. 1: Architecture for farm monitoring

Data Collection

The IoT devices or things are a collection of embedded systems that communicate with other devices through internet. This is sometimes referred as IoT sensors. In the architecture, various IoT sensors are used such as drone, temperature sensor, humidity sensor, soil moisture sensor, sound sensor and air sensor for smart farming. These sensors monitor and measure the various farm variables like temperature level, humidity, wind speed, soil content, pest infection and rainfall.

Data sharing

In IoT systems, communication technologies play a vital role for a successful deployment. Basically, the communication technology requirements can be classified as standard, spectrum and application layout. The communication standard can be divided into short-range and long-range communication standard. The communication spectrum can be divided into licensed and unlicensed spectrum. The IoT application scenarios can be grouped based on sensors or network, and deployment scenarios. With the help of these communication technologies, the data can be transferred to the cloud successfully.

Data storing in cloud with internet

The IoT devices or things are connected to the internet to gather information about the environment which is done using sensors. The collected data is stored in the cloud environment for analysis. Cloud is a paradigm that enables ubiquitous access to a shared pool of configurable system resources which provides high level service with minimal cost and management scale over the

internet. The cloud is used here for storing images, weather data etc., and to monitor the farm. Thus, the stored data is available and accessible always to the physical environment. The sensors are used for collecting data and the collected data are stored in the cloud storage. The IoT cloud is designed to store and pre-process the data and perform analytics like predictions.

Data Processing and visualizing

The last phase in the architecture is processing and visualizing the analysed data. In this phase, the data is analysed in the cloud by using different algorithms to make a decision. The large amounts of data which was collected by various sensors are cleaned and processed. The unwanted data is cleaned using pre-processing techniques and the prediction techniques are used for decision making. Thus, the predicted results will be sent to the farmer through the mobile app. The farmers can easily identify the status of the farm through a suitable interface. It will aid the farmers to monitor the farm and take appropriate decisions and actions. Furthermore, if there is any disease or damage in the farm then a notification and recommendation will be sent to the farmers to take the needful action to eradicate the disease.

Conclusion

The proposed architecture will help the farmers to monitor the farms periodically. Manual work could be reduced by adopting this architecture in monitoring the farm and disease identification. Since, the diseased images are captured using drones in an Ariel view, the entire farm is covered without missing any plant and within a short span of time a vast area can be covered. The latest technologies such as cloud and IoT are used in this architecture. The status of the plant condition like temperature level, humidity level, soil nutrients etc., are observed using various sensors. The proposed model performs only the monitoring process. In future, an integrated architecture for automation of the agricultural process can be proposed.

References

1. Gubbi, Jayavardhana, Rajkumar Buyya, Slaven Marusic, and Marimuthu Palaniswami, Internet of Things (IoT): A vision, architectural elements, and future directions, *Future generation computer systems*, Vol. 29, No. 7, 2013, pp. 1645-1660.
2. Keertikumar, M., M. Shubham, and R. M. Banakar, "Evolution of IoT in smart vehicles: An overview. In: *Green Computing and Internet of Things (ICGCIoT)*, 2015, International Conference on IEEE, 2015, pp. 804-809.
3. Kadam, S., P. Yewale, and V. Sharma, Comparative Study of IOT Based Smart Garbage System. *International Journal of Current Trends in Engineering & Research (IJCTER)*, Vol. 3, No. 6, 2017, pp. 1-6.
4. Paul, Chinju, Amal Ganesh, and C. Sunitha. An overview of IoT based smart homes. *IEEE*, 2018, pp. 43-46.

5. Chen, Shanzhi, Hui Xu, Dake Liu, Bo Hu, and Hucheng Wang. A vision of IoT: Applications, challenges, and opportunities with china perspective. *IEEE Internet of Things journal*, Vol. 1, No. 4 2014, pp. 349-359.
6. Gill, Sukhpal Singh, Inderveer Chana, and Rajkumar Buyya. IoT based agriculture as a cloud and big data service: The beginning of digital India. *Journal of Organizational and End User Computing (JOEUC)*, Vol. 29, No. 4, 2017, pp. 1-23.
7. Stoces, M., J. Vanek, Jan Masner, and J. Pavlík. Internet of things (IoT) in agriculture-selected aspects. *Agris on-line Papers in Economics and Informatics*, Vol. 8, No. 1, 2016, pp. 83.
8. Daisy Shergill, Akashdeep Rana, and Harsimran Singh, "Extraction of rice disease using image processing. *International Journal of Engineering Sciences & Research technology*, 2015, pp. 135-143.
9. Malvika Ranjan, Manasi Rajiv Weginwar, Neha Joshi, and A. B. Ingole, Detection and classification of leaf disease using artificial neural network. *International Journal of Technical Research and Applications*, e-ISSN: 2320-8163, Vol. 3, No. 3, 2015, pp. 331-333.
10. Islam, Monzurul, Anh Dinh, Khan Wahid, and Pankaj Bhowmik. Detection of potato diseases using image segmentation and multiclass support vector machine. In: *Electrical and Computer Engineering (CCECE), 2017 IEEE 30th Canadian Conference on, IEEE, 2017*, pp. 1-4.
11. Sabu, Amala, and K. Sreekumar. Literature review of image features and classifiers used in leaf based plant recognition through image analysis approach. In: *Inventive Communication and Computational Technologies (ICICCT), IEEE, 2017*, pp. 145-149.
12. Hazman, Maryam. Crop irrigation schedule expert system. In: *ICT and Knowledge Engineering (ICT & Knowledge Engineering 2015). IEEE, 2015*, pp. 78-83.
13. Sannakki, Sanjeev S., Vijay S. Rajpurohit, V. B. Nargund, and Pallavi Kulkarni. Diagnosis and classification of grape leaf diseases using neural networks. *Communications and Networking Technologies (ICCCNT), IEEE, 2016*, pp. 1-5.
14. Sahu, Chandan Kumar, and Pramitee Behera. A low cost smart irrigation control system. In: *Electronics and Communication Systems (ICECS), 2015*, pp. 1146-1152.
15. Darshana Chaware, Ashwini Raut, Mrunal Panse and Aniruddha Koparkar. Sensor Based Automated Irrigation System. *International Journal of Engineering Research & Technology*, Vol. 4, No. 5, 2015, pp. 33- 37.
16. Arivazhagan, Sai, R. Newlin Shebiah, S. Ananthi, and S. Vishnu Varthini. Detection of unhealthy region of plant leaves and classification of plant leaf diseases using texture features. *Agricultural Engineering International: CIGR Journal*, Vol. 15, No. 1, 2015, pp. 211-217.

IoT Based Mobile Controlled Home Appliances

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Abstract

Remotely controlling various devices has been constantly evolving over the recent times. The proposed system provides reliable means to control and monitor home appliances remotely using mobile devices. The automated home concept presented in this system improves the quality of human life. It enables the user to control home appliances like Light, Fan, Air conditioner, Television etc., with a press of the mobile key from anywhere. The concept of remotely controlling the appliances is achieved with the help of a touch input smart phone along with android operating system. The android application acts as a transmitter, which sends the command messages to the receiver where the loads are connected. By operating the specified remote switch on the transmitter by the data sent from the MQTT (Message Queue Telemetry Transport) Broker application, the loads can be turned ON/OFF remotely through wireless technology. The embedded devices that are small and efficient are used to control the home appliances which are based on IoT (Internet of Things).

Keywords: Appliances, MQTT, IoT, NodeMCU, Embedded device.

1. Introduction

The IoT is an enabling technology which consists of things connected in a network to communicate and share data. The lifetime of the user becomes more comfortable by adopting the assorted IoT based technologies [1]. This system is designed to provide assistance and support for elderly and differently abled persons who may find it difficult to access the manual system. The IoT vision encompasses several building blocks that integrate and engage multi-disciplinary and inter-disciplinary activities from both business and technical domains [2]. This system intends to control appliances and embedded devices in the house with comparatively low cost, ease of installation and also a user-friendly interface.

The general idea of the system is to employ various sensors and control systems to monitor the appliances and according to the needs of the user the services are provided. It enables the user to control home appliances like Light, Fan, Air conditioner, Television etc., with a press of a mobile key from anywhere. The concept of remotely controlling the appliances is achieved with the help of a touch

input smart phone along with android operating system. The android application acts as a transmitter, which sends the command messages to the receiver where the loads are connected. By operating the specified remote switch on the transmitter by the data sent from the MQTT Broker application, the loads can be turned ON/OFF remotely through wireless technology. The usage of wireless networks has been rapidly increasing and this facilitates fast and reliable communication link between the smart devices. The embedded devices that are small and efficient are used to control the home appliances which are based on IoT (Internet of Things). The transfer of data between the remote application and the embedded device is through MQTT protocol devised especially for Internet of Things. This was developed as a highly light weighted publish/subscribe messaging transport protocol and so it is used in a variety of home appliances and other small device scenarios [3].

Node MCU microcontroller is used to perform the control tasks. It also includes firmware that runs on the ESP8266 Wi-Fi SoC (System On A Chip) from Espressif Systems and the hardware which is based on the ESP-12 module. The MyMQTT application is used to connect to MQTT v3.1 Broker, subscribe to various topics, and publish messages to a topic and save messages. Mobile Controlled Home Appliances using Internet of Things is an innovative application developed to control the various home appliances remotely. IoT research can be a challenging process spanning both virtual and physical domains through the use of simulators and testbeds to develop and validate the initial proof-of-concepts and subsequent prototypes [4]. The proposed system can provide safer, more comfortable, energy efficient and economical dwelling to the life of humans.

2. Review of Literature

The term “smart house” was coined in the early 1984. All the researchers are trying to put some handheld device (e.g. mobile or some battery powered device) in the hand of people to increase level of comfort [5].

Piyare and Tazil [6] discussed the full functionality of the home automation system that was tested and the wireless communication between the cell phone and Arduino BT was found to be limited to < 50 m and a maximum of 100 m within a concrete building. The Symbian OS cell phones only supported Python scripts. There are very few devices that support this Operating System.

Shinde *et al.* [7] proposed an android application system which was used to perform the basic switch operations. The system provided restricted access to user that is limited to only same network. This has the disadvantage that the user cannot have the liberty of free mobility.

Kumar *et al.* [8] proposed an Arduino based Home Automation system which depicts the functioning using a prototype. The major challenges lie in the lack of standards for integrating various sensors, applications and other existing intelligent embedded devices. Providing unique IP addresses for connected

devices and privacy and security in a smart home environment is another big challenge.

With the increasing demands for automation in daily life, remotely controlling appliances has become a hot topic. The existing system requires direct human interaction to control the appliances which is time consuming and inefficient. Humans tend to forget things and if they leave their electrical appliances turned on unnecessarily, a high cost has to be spent for electricity. In the modern fast developing world with the advancements in technologies, the quality of life also has to be improved.

3. Proposed Approach

The proposed system “IoT based Mobile Controlled Home Appliances” has provisions for the problems encountered in the existing system. The proposed architecture is shown in Fig 1. This system enables to control the appliances with the help of a mobile application which is easily portable and reliable. The mobility of the application makes it to be available to the user independent of the user’s location. It eliminates the need for manual work and makes a remote device to take control of the appliances. This system provides authentication of users that increases the security. It also increases human comfort. This system also provides special functions like customizable timing, temperature offset, and speed for an appliance making it more efficient and convenient for the users.

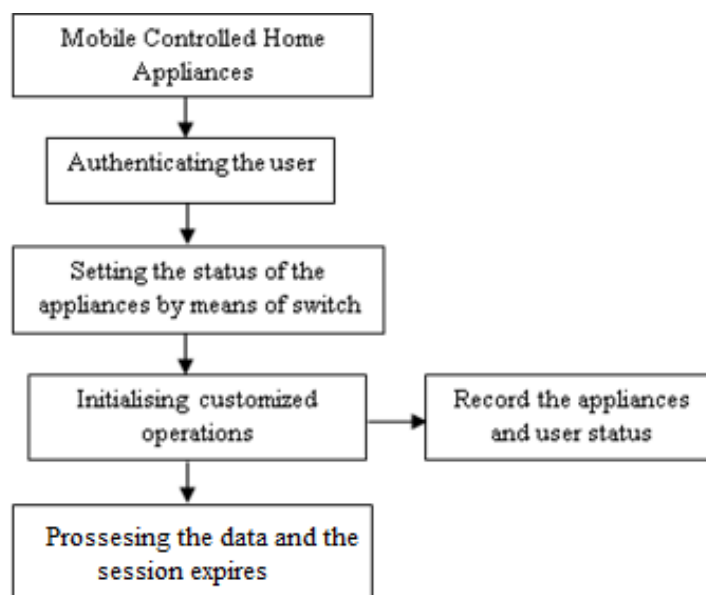


Fig 1: Proposed Architecture for Remote Monitoring

“IoT based Remotely Controlling Home Appliances” refers to the control of home appliances from a remote point. Automation is drastically being incorporated in various sectors and more tasks are performed automatically either remotely or in close proximity. The proposed system enables controlling of the appliances with the help of a mobile application which is easily portable and reliable. It eliminates the need for manual work and makes a remote device to take control of the appliances. The drastic development in the field of technology has emerged to improve the quality of living for the humans. The developed system has modest requirement, as only minimal changes are required with appliances and environment for implementing this system. The system requires hardware that are commonly used as household appliances. The user needs to have minimal knowledge about IOT and the embedded hardware for understanding the systems’ functionality. The proposed system is economically feasible as it has a well-designed system and is secure, simple to use and efficient to manage. It saves time and labor. This is a onetime investment that provides reliability and comfort. The operations of this system are simple, so that minimal knowledge is adequate to understand the working of the system. This system is user-friendly and so it is operationally feasible.

3.1 Authentication Module

The process of authentication determines whether the identity claimed by the user is true. The module makes sure that only the legitimate user makes use of the rendered services. The Login module is to authenticate the users of the system so that they are authorized users to access the system. The user can use forgot password link when they forget the same by providing the e-mail address.

3.2 House Owner Module

The House Owner Module provides the administrator privileges to the owner of the house. This module has a default logon credentials that can be modified anytime by the owner. The owner has complete control of the entire system. This module incorporates the following sub modules:

- i) **Register Member Module:** The module requires the house owner to register a new member providing the necessary details and after which the new member can logon to the system by using the credentials and use it. The owner is the sole administrator and the rest of the users are registered as members of the system.
- ii) **Remove Member Module:** The owner can anytime remove a member for the system by providing the user code owing to any inappropriate behavior or any other reasons thereby terminating their access.
- iii) **Modify Credentials Module:** This module is used to change the existing personal credentials of the owner. Modifying the credentials over a period of time increases the security of the system which in turn provides reliability.
- iv) **Member Identification Module:** Using the module, the house owner can view the list of members who are part of the system. It makes the owner to

be aware of the all the members who access it. The owner can also use this module to retrieve the user code of any member when they forget it.

3.3 House Member Module

The module permits the authorized house member to access the system and control the appliances. The member is registered by the house owner using the register member module. The member has an abstracted view of the system owing to their identity. The activities of all the members are constantly watched and stored in the database. The “Modify Credentials” submodule is used to change the existing personal credentials of the member. As the default credentials will be set by the house owner, the member can modify their credentials to gain confidence while accessing the system. The member can also change their credentials over a period of time to ensure the security of the system and their identity.

3.4 Control Appliances Module

The “Control Appliances” is a core module that is common to all the authorized users of the system. This module provides a means to control the various household appliances and perform the actions associated with each of it. The MQTT protocol based MyMQTT broker is used to connect the application and the edge device. The user details are also stored so that they cannot later deny the performed actions. This system provides a means to control the following appliances which form the sub modules.

- i) **CFL Light Module:** The CFL (Compact Fluorescent Lamp) light or simply the light bulb module controls the basic activities of the light bulb. This can be either switched on or off with the mobile application. A timing sub module is also developed so that the light can be switched on for a specific time and it automatically switches itself off when the specified time elapses. The status and the time is sent from the application to the device via MyMQTT Broker and accordingly the details pertaining to the device along which the username and the time at which the operation is done are stored in the respective database.
- ii) **Fan Module:** The Fan Module is used to switch on and off the fan remotely. This module also controls the speed of the fan i.e. the speed at which the fan has to rotate is provided by the end user which facilitates the knob to be controlled by the mobile application. This controls the motor inside the fan. The status and the speed details are sent from the application to the device via MyMQTT Broker and accordingly the details pertaining to the device along which the username and the time at which the operation is done are stored in the respective database.
- iii) **Temperature Module:** The Temperature module controls the temperature of the appliances like air conditioner or coffee maker or any other temperature based home appliances. Here, this module is used to perform the basic functionalities like switching on and off on a coffee maker. It is

also used to provide the threshold temperature i.e. the temperature at which the device has to automatically turn itself off. The status and the temperature details are sent from the application to the device via MyMQTT Broker and accordingly the details pertaining to the device along with the username and the time at which the operation is done are stored in the respective database.

3.5 Appliances Status Report Module

The Appliances Status Report Module is used to provide a list of the appliances along with the details of their status, the user who has initiated the action and the time at which it was done. It typically denotes what are the devices that are in the on state and those that are in the off state. This module is useful to determine the user who has initiated the particular operation on the appliance. The house owner will also be able to determine which member was careless in switching off the appliance through analysis over a period of time and the owner can instruct that member.

4. Experimental Setup

The proposed system, “IoT based Mobile Controlled Home Appliances” provides an efficient method of controlling the home appliances remotely and also improves the quality of life. Before entering into the system the following prerequisites are to be considered.

4.1 Software Prerequisites

The major prerequisites are Android Studio, MyMQTT and Arduino. The Android Application is created and it is configured along with the MQTT protocol. The MyMQTT application is used to subscribe/publish the messages by providing the necessary details namely topic name, port number, quality of service and message. The Arduino software is used to develop the embedded code for the devices. After this process has been completed, the user can proceed to access the system.

4.2 Hardware Requirements

The following are the major hardware requirements that are required to implement the software system.

- i) **NodeMCU:** NodeMCU (Fig 2) is an open source development board and firmware based in the widely used ESP8266 -12E WiFi module. It is an extremely powerful tool for Wifi networking.



Fig. 2: NodeMCU

- ii) **DHT11 Basic Temperature-Humidity Sensor:** The DHT11 (Fig 3) is a basic, low cost digital temperature and humidity sensor. It is simpler to use but requires careful timing to receive data.

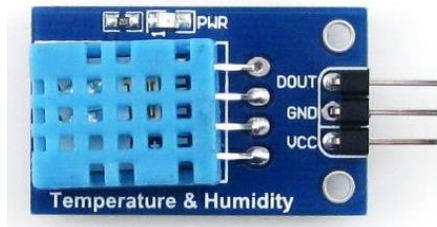


Fig. 3: DHT11 Sensor

- iii) **One-Channel Relay module:** A relay (Fig 4) is an electrically operated device that has a control system called input circuit and controlled system called output circuit.



Fig. 4: One-Channel Relay

- iv) **Jumper Wires:** The term "jumper wire" (Fig 5) refers to a conducting wire which connects two points that have connector pins by means of an electrical connection without soldering.



Fig. 5: Jumper Wires

- v) **Digital RTC:** The RTC (Fig 6) can be used to store and retrace the current time, while the EEPROM offers storage space which can be used for logging the data. The RTC uses the inbuilt battery to keep track of time even when Arduino or any external microcontroller is not powered. Consequently, the EEPROM saves the data even after the power is switched off.



Fig. 6: Digital RTC

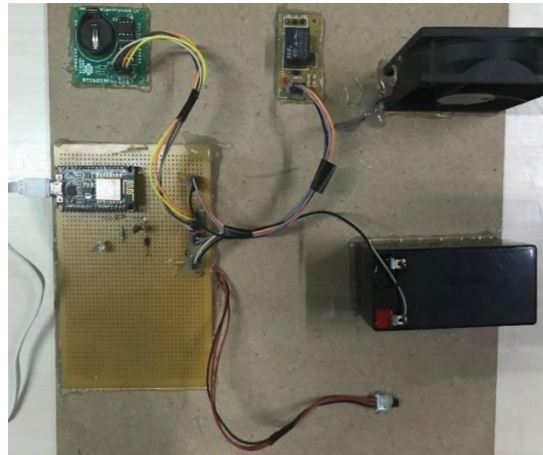


Fig. 7: Experimental Setup

```
iHomeAutomation | Arduino 1.8.5
File Edit Sketch Tools Help

iHomeAutomation:
const char* mqttServer = "iot.eclipse.org";
const int mqttPort = 1883;

WiFiClient espClient;
PubSubClient client(espClient);
int endMinute=0;
float temperature=0.0;
float currentTemperature=0.0;
float tempPayload;
void setup() {

  Serial.begin(115200);
  //Wire.begin();
  rtc.begin();
  rtc.adjust(DateTime(F(__DATE__),F(__TIME__)));
  sensors.begin();
  WiFi.begin(ssid, password);

  while (WiFi.status() != WL_CONNECTED) {
    delay(500);
    Serial.println("Connecting to WiFi..");
  }
  Serial.println("Connected to the WiFi network");

  client.setServer(mqttServer, mqttPort);
  client.setCallback(callback);

  while (!client.connected()) {
```

Fig. 8: Sample Code sheet

The proposed system provides two modes of access for the users namely House Owner access and the other one is for the House Members.

4.3 House Owner

The House Owner acts as the administrator and logs into the system using the temporary default credentials provided to her/him. The Owner is capable of registering new members into the system using the Add New Member Module. The Owner can remove any member using the Remove Member Module. The Owner can modify their credentials using the Modify Credentials Module. As mentioned earlier the owner can use the Control Appliances module to remotely control the various appliances. The Owner can view the status report of the various devices, members, state of the appliances and the access time. The Owner can view the list of members who are part of the system.

4.4 House Member

The House Members are the registered users and they can log into the system using the temporary default credentials provided to her/him. The Member can modify their credentials using the Modify Credentials Module. Since the owner has to use the default credentials provided, they can use this module to modify them to increase the security and reliability of the system. As mentioned earlier the member can use the Control Appliances module to remotely control the various appliances. The Member can view the status report of the various devices, members, state of the appliances and the access time.

Conclusion

The need for security and automated systems have become increasingly on demand. It is evident from this research work that this system has been cost-effectively engineered and has made use of locally available components that have been used to control multifarious home appliances like coffee maker, lights, fan and other appliances. This system controls appliances and embedded devices in the house with comparatively low cost, ease of installation and with a user-friendly interface. It provides a secure method of authenticating the users onto the system. This system also enables controlling the appliances with the help of a mobile application which is portable and reliable. It removes the need for manual work and makes a remote device to take control of the appliances. The system reduces human labor and effortlessly provides the necessary access. The appliances can be controlled from any distance as it implements the MQTT protocol over the internet making the system extremely distributed. The drastic development in the field of technology has improved the quality of living for the humans. Over the years, Internet of Things has been a hot topic and the applications engineered with the domain have a great value. At the same time, they rely mostly on the internet or other network connectivity and hence their usage plays a pivotal role. In the future, the security of the system can be improvised by implementing advanced mechanisms like biometrics. Many home appliances can be integrated in order to be a more sophisticated system. More customized innovative activities can be included for the appliances so that it provides comfort and satisfaction for the end user.

References

1. Sajjad Hussain Shah, IlyasYaqoob, “A Survey: Internet of Things (IOT) Technologies, Applications and Challenges”, 4th IEEE International Conference on Smart Energy Grid Engineering, 2016.
2. Veronesi, L. “IoT Today: Be A Disruptor or Be Disrupted – Look At Your Business in A Whole New Way”, 21 Sep, 2017. Available: <http://www.digitalistmag.com>
3. Gastón C. Hillar, “MQTT Essentials - A Lightweight IoT Protocol” (2017).
4. Chernyshev, M., Z. Baig, O. Bello, S. Zeadally, Internet of Things (IoT): Research Simulators and Testbeds, *IEEE Internet of Things Journal*, No. 99, pp. 1-1, 2017.
5. Gopinath Velivela, Srija Arigela, S Krishna Rao, and Madhuri Avula. (2018). Smart Homes: Steps, Components, Utilities and Challenges. *International Journal of Engineering & Technology*. 7. 436. 10.14419/ijet.v7i2.7.10858.
6. Piyare, R. and M. Tazil, Bluetooth based home automation system using cell phone. *IEEE 15th International Symposium on Consumer Electronics*, 2011.
7. Shinde, H. B., Abhay Chaudhari, Prafull Chaure, Mayur Chandgude, and Pratik Waghmare. Smart Home Automation System using Android Application. *International Research Journal of Engineering and Technology (IRJET)*, Vol. 4(4), Apr 2017.
8. Kumar Mandula, C. H. Ramu Parupalli, A. S. Murty, E. Magesh and Rutul Lunagariya. Mobile based home automation using Internet of Things (IoT). *International Conference on Control Instrumentation Communication and Computational Technologies (ICCICCT)*. pp. 340-343, 18-19 Dec. 2015.

A Study on Women Entrepreneurship Development and Entrepreneurial Behaviour among Self-Help Groups in Kanyakumari District

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Abstract

Entrepreneurship plays a prominent role in industrial development and the concept of women entrepreneurship has gained considerable popularity around the globe in recent years. The present study is a pioneering attempt to study the effectiveness of Self-Help Groups as a tool to develop entrepreneurship among women through an exploratory research. The study examines how the SHGs have been instrumental in developing entrepreneurship in women. The methodology adopted in this study is both descriptive and analytical. The study has used convenience sampling method. The sample respondents for the study were 150 women entrepreneurs of Self-Help Groups in Kanyakumari district. It is concluded that the development of entrepreneurial talent is important to sustaining a competitive advantage in a global economy that is catalyzed by innovation. Increasing in the level of entrepreneurial traits could enlarge the number of potential and actual entrepreneurs who in turn could generate more employment and create national wealth.

Keywords: Women Entrepreneurs, Self-Help Groups, Entrepreneurship Development, Entrepreneurial Behavior

Introduction

Entrepreneurship plays a prominent role in industrial development and the concept of women entrepreneurship has gained considerable popularity around the globe in recent years and is no longer considered as an assortment of all sorts of arbitrary facts and figures to choose from different angles, instead, a systematic, purposeful and objective study of a wide range of disciplines, cultural variances, value systems and environment around us.

Statement of the Problem

Women entrepreneurs face additional hurdles than men. They face constrain relating to self- sphere system including age, experience, education, job satisfaction, value orientation, decision making ability, family, occupation, caste and the like. Only when these hurdles are removed, they can become successful entrepreneurs. Women entrepreneurs are taking up challenging entrepreneurial assignment in urban areas. In rural areas, large amount of potential remains untapped due to lack of supportive means and management. The constrain they

face is basically related to finance, which must be removed by attending immediately by concerned authorities. The Non-Governmental Organization, operating in rural areas, in addition to forming self-help groups may also concentrate on entrepreneurial development. Each and every person who is interested to take up a business should have minimum level of entrepreneurial outlook for succeeding in the business. The members of a Self-Help group are all engaged in a variety of business activities including manufacturing trading and distributing products for improving their overall economic status in the society. Therefore, entrepreneurial approach is very much necessary to strengthen their potential for their survival and succeed. Since all the studies discussed above are general in nature, therefore, it is necessary to undertake a study to analyse the women entrepreneurship development among Self-Help Groups in Kanyakumari District.

Objectives of the Study

1. To study the entrepreneurial behavior of SHG's members in Kanyakumari District.
2. To identify the main reasons for starting the enterprises by members of Self-Help Groups in Kanyakumari District.

Methodology

The present study is a pioneering attempt to study the effectiveness of Self-Help Groups as a tool to develop entrepreneurship among women through an exploratory research. This is an analytical study on the Self-Help Groups as a tool to develop entrepreneurship among women. The study examines how the SHGs have been instrumental in developing entrepreneurship in women. The methodology adopted in this study is both descriptive and analytical.

Sample Design

The study has used convenience sampling method. Even though SHGs have been trying to promote entrepreneurship development throughout India, the Kanyakumari district has been chosen as the main area of study, as the researcher is a native of the district. The sample respondents for the study were 150 women entrepreneurs of Self-Help Groups in Kanyakumari district.

Limitations of the Study

The study has the following limitations:

1. The study covers the Kanyakumari district and only selected Self-Help Groups that fall under the purview of the study;
2. The study has not covered all the Self-Help Groups in general but just those only for women SHGs with entrepreneurial activity;
3. The study has elicited only the opinions of the Self-Help Groups entrepreneurs;

Analysis and Interpretation

Age group of women entrepreneurs of SHG members and reasons for starting the enterprises:

The null hypothesis has been framed as, “there is no significant difference in reasons for starting the enterprises among different age groups of women entrepreneurs of SHG members in Kanyakumari District”. The result is presented in the Table-1.

Table-1: Age group of Women entrepreneurs of SHG members and Reasons for starting the enterprises - ANOVA

Reasons	Age	Mean	Standard Deviation	d.f.	F Value	p Value
Economic reasons	Below 25 yr.	31.0882	2.6442	5	2.740	0.029
	25-35 yr.	30.6579	2.6098	144		
	35-45 yr.	30.2353	2.5878	149		
	45-55 yr.	29.3056	2.8667			
	Above 55 yr.	31.2857	3.8914			
Personal and family reason	Below 25 yr.	51.7941	3.5741	5	1.201	0.438
	25-35 yr.	51.9211	4.6547	144		
	35-45 yr.	52.0198	5.0338	149		
	45-55 yr.	52.2500	4.0382			
	Above 55 yr.	51.0000	5.0230			
Social and cultural reasons	Below 25 yr.	33.4706	3.5096	5	1.075	0.369
	25-35 yr.	33.6228	3.0261	144		
	35-45 yr.	34.2157	3.2077	149		
	45-55 yr.	33.7778	2.7162			
	Above 55 yr.	32.6923	2.0569			
Infrastructural reasons	Below 25 yr.	29.3235	2.7272	5	1.521	0.196
	25-35 yr.	29.7522	2.6877	144		
	35-45 yr.	30.4608	3.3734	149		
	45-55 yr.	30.4444	3.0185			
	Above 55 yr.	29.5714	2.3766			

Source: Primary data

From the ANOVA test it is found that the ‘F’ value for economic reasons for starting the enterprises among different age groups of women entrepreneurs of SHG members is (F value) 2.740 which is significant at 5 per cent with p value of 0.029. Since p value is less than the 0.05, the null hypothesis is rejected. It is concluded that age is a significant variable in determining economic reasons for starting the enterprises among women entrepreneurs of SHG members.

Literacy level of women entrepreneurs of SHG members and reasons for starting the enterprises:

For this purpose, a null hypothesis has been framed as, “there is no significant difference in reasons for starting the enterprises among different literacy level of women entrepreneurs of SHG members in Kanyakumari District”. The result found with the help of ANOVA has been tabulated in the following table.

Table-2: Literacy level of women entrepreneurs of SHG members and reasons for starting the enterprises - ANOVA

Reasons	Literacy Level	Mean	Standard Deviation	d.f.	F Value	p Value
Economic Reasons	Illiterates	32.2941	1.9926	5	2.043	0.073
	Can sign only	30.8065	2.6636	144		
	Primary education	30.3684	2.7408	149		
	Secondary education	30.1683	2.6835			
	Graduate	30.3333	3.0451			
	Others	29.8182	2.3587			
Personal and family reason	Illiterates	51.8235	3.6612	5	1.125	0.347
	Can sign only	52.6452	5.5290	144		
	Primary edu.	51.3789	4.6407	149		
	Secondary education	51.9208	4.3167			
	Graduate	53.0222	5.0564			
	Others	50.5000	2.5055			
Social and cultural reasons	Illiterates	34.1250	3.2223	5	0.477	0.794
	Can sign only	33.9677	3.8771	144		
	Primary edu.	33.4632	3.2348	149		
	Secondary education	34.0297	2.9579			
	Graduate	33.8222	2.5698			
	Others	33.1818	2.2724			
Infrastructural reasons	Illiterates	30.2353	2.5379	5	0.738	0.595
	Can sign only	30.3226	3.1769	144		
	Primary edu.	29.8421	2.9762	149		
	Secondary education	29.7800	2.9766			
	Graduate	30.6889	3.1394			
	Others	29.8182	2.6007			

Source: Primary data

From the ANOVA test it is found that the 'F' value for economic reasons, personal and family reasons, social and cultural reasons and infrastructural reasons for starting the enterprises among different literacy level of women entrepreneurs of SHG members is (F value) 2.043, 1.125, 0.477, 0.738 which is significant at 5 per cent with p value of 0.073, 0.347, 0.794, 0.595. Since p value is higher than the 0.05, the null hypothesis is accepted. It is concluded that literacy level is not a significant variable in determining the economic reasons, personal and family reasons, social and cultural reasons and infrastructural reasons for starting the enterprises among women entrepreneurs of SHG members in Kanyakumari District.

Marital status of women entrepreneurs of SHG members and reasons for starting the enterprises:

For this purpose a null hypothesis has been framed as, "there is no significant difference in reasons for starting the enterprises among different marital status of women entrepreneurs of SHG members in Kanyakumari District". The result found with the help of ANOVA has been tabulated in the following table.

Table-3: Marital Status of Women entrepreneurs of SHG members and Reasons for starting the enterprises - ANOVA

Reasons	Marital Status	Mean	Standard Deviation	d.f.	F Value	p Value
Economic Reasons	Married	30.3420	2.7314	5	0.400	0.753
	Unmarried	30.7885	2.8099	144		
	Widow	30.6154	2.4337	149		
	Divorced	30.2500	3.7749			
Personal and family reason	Married	51.9696	4.7884	5	0.157	0.925
	Unmarried	52.0000	3.9058	144		
	Widow	51.0769	4.5362	149		
	Divorced	52.0000	3.3665			
Social and cultural reasons	Married	33.7965	3.0284	5	0.621	0.602
	Unmarried	33.8269	3.4963	144		
	Widow	34.0833	2.4293	149		
	Divorced	31.7500	2.2174			
Infrastructural reasons	Married	30.0739	3.0410	5	1.321	0.268
	Unmarried	29.6154	2.8980	144		
	Widow	31.1538	2.0755	149		
	Divorced	28.5000	2.3805			

Source: Primary data

From the ANOVA test it is found that the 'F' value for economic reasons, personal and family reasons, social and cultural reasons and infrastructural reasons for starting the enterprises among different marital status of women

entrepreneurs of SHG members is (F value) 0.400, 0.157, 0.621, 1.321 which is significant at 5 per cent with p value of 0.753, 0.925, 0.602, 0.268. Since p value is higher than the 0.05, the null hypothesis is accepted. It is concluded that marital status is not a significant variable in determining the economic reasons, personal and family reasons, social and cultural reasons and infrastructural reasons for starting the enterprises among women entrepreneurs of SHG members in Kanyakumari District.

Entrepreneurial Behaviour among different Age Group of women entrepreneurs of SHG's members:

An attempt was made to know the entrepreneurial behaviour based on age group of women entrepreneurs of SHG's members. Hence the entrepreneurial behaviour was analysed among different age group of women entrepreneurs of SHG's members in Kanyakumari district.

Table-4: Kruskal Wallis Test – Mean Rank for Age group of Women entrepreneurs of SHG's members and Entrepreneurial Behaviour

Entrepreneurial Behaviour	Mean Rank				
	Up to 25	25-35	35-45	45-55	Above 55
Risk bearing ability	138.21	157.74	150.85	152.08	114.75
Owning responsibility	151.34	151.65	150.75	160.18	112.39
Time use pattern	140.21	152.18	155.65	150.92	123.21
Marketing facility	175.04	149.75	149.42	144.46	120.46
Regularity in saving	166.26	145.98	159.32	140.31	110.96
Awareness and group success	185.74	143.40	148.95	135.89	171.57

Source: Computed data

H₀: There is no significant difference between mean rank for age group of women entrepreneurs of SHG's members and entrepreneurial behaviour.

Table-5: Results of Kruskal-Wallis Test - Age group of women entrepreneurs of SHG's members and Entrepreneurial Behaviour

Entrepreneurial Behaviour	Chi-square value	p Value	Significance/ Not significance
Risk bearing ability	4.633	0.327	NS
Owning responsibility	3.906	0.419	NS
Time use pattern	2.727	0.599	NS
Marketing facility	5.509	0.239	NS
Regularity in saving	6.861	0.143	NS
Awareness & group success	9.644	0.047	S

S: Significant (p < 0.05); NS: Not Significant (p > 0.05). Source: Computed data

The table lists the result of the Kruskal-Wallis test. Since the p-value is greater than 0.05, the null hypothesis is accepted at 5 per cent level of significance. Hence, this means that all the respondents have almost given similar rank to entrepreneurial behaviour except 'Awareness & group success'. It can be concluded that age group of the respondents does not affect the ranking given to entrepreneurial behaviour except 'Awareness & group success' (CV 9.644, p value 0.047, $p < 0.05$).

Entrepreneurial behaviour among different marital status of women entrepreneurs of SHG's members:

An attempt was made to know the entrepreneurial behaviour based on marital status of women entrepreneurs of SHG's members. Hence the entrepreneurial behaviour was analysed among different marital status of Women entrepreneurs of SHG's members in Kanyakumari district.

Table-6: Kruskal Wallis Test - Mean Rank for Marital Status of Women entrepreneurs of SHG's members and Entrepreneurial Behaviour

Entrepreneurial Behaviour	Mean Rank			
	Married	Unmarried	Widow	Divorced
Risk bearing ability	149.04	150.77	186.42	114.75
Owning responsibility	147.53	156.42	185.31	131.75
Time use pattern	147.66	156.02	163.88	199.50
Marketing facility	145.66	162.36	164.85	213.25
Regularity in saving	151.21	139.84	179.88	152.50
Awareness and group success	144.11	159.06	213.50	203.25

Source: Computed data

H_0 : There is no significant difference between mean rank for marital status of women entrepreneurs of SHG's members and entrepreneurial behaviour.

Table-7: Results of Kruskal-Wallis Test – Marital status of women entrepreneurs of SHG's members and entrepreneurial behaviour

Entrepreneurial Behaviour	Chi-square value	p Value	Significance/ Not significance
Risk bearing ability	3.562	0.313	NS
Owning responsibility	3.437	0.329	NS
Time use pattern	2.487	0.478	NS
Marketing facility	4.861	0.182	NS
Regularity in saving	2.672	0.445	NS
Awareness and group success	11.795	0.008	S

S: Significant ($p < 0.05$); NS: Not Significant ($p > 0.05$)

Source: Computed data

The table lists the result of the Kruskal-Wallis test. Since the p-value is greater than 0.05, the null hypothesis is accepted at 5 per cent level of significance. Hence, this means that all the respondents have almost given similar rank to entrepreneurial behaviour except 'Awareness & group success'. It can be concluded that marital status of the respondents does not affect the ranking given to entrepreneurial behaviour except 'Awareness & group success' (CV 11.795, p value 0.008, $p < 0.05$).

Entrepreneurial behaviour among different type of family of women entrepreneurs of SHG's members:

H_0 : There is no significant difference between mean rank for type of family of the women entrepreneurs of SHG's members and entrepreneurial behaviour.

The Mann-Whitney U test was used to analyze the entrepreneurial behaviour based on type of family of women entrepreneurs of SHG's members and test the proposed null hypothesis. The details of the result of Mann-Whitney U test is reported in Table-8.

Table-8: Results of Mann-Whitney U Test – Type of family of women entrepreneurs of SHG's members and entrepreneurial behaviour

Entrepreneurial Behaviour	U-value	Z-value	p-value	Mean rank	
				Joint Family	Nuclear family
Risk bearing ability	10712.00	-0.131	0.896	149.77	150.99
Owning responsibility	9784.000	-1.531	0.126	142.03	156.14
Time use pattern	8812.000	-2.978	0.003	133.93	161.54
Marketing facility	9905.000	-1.331	0.183	143.04	155.47
Regularity in saving	10787.00	-1.019	0.985	150.61	150.43
Awareness and group success	10599.00	-0.295	0.768	148.82	151.62

S: Significant ($p < 0.05$); NS: Not Significant ($p > 0.05$)

Source: Computed data

The table lists the result of the Mann-Whitney test. Since the p-value is greater than 0.05, the null hypothesis is accepted at 5 per cent level of significance. Hence, this means that all the respondents have almost given similar rank to entrepreneurial behaviour except 'Time use pattern'. It can be concluded that types of family of the respondents does not affect the ranking given to entrepreneurial behaviour except 'Time use pattern' (CV 8812.000, p value 0.003, $p < 0.05$).

Suggestions

- The bank must lend its loan directly to SHG members on individual basis through SHGs. It should regulate all SHGs to open a bank account for the entire individual member at the nearest locality, (as a part of financial inclusion process).
- The Government can grant subsidy on the raw materials used by women entrepreneurs. Fair price shops could be organized by the Government to supply at a reasonable price quality raw material needed by these women entrepreneurs. Thereby, the presence of middlemen can be avoided. This will also pave the way for avoiding the difficulties faced by the entrepreneurs regarding storage of raw materials.
- The Government can fix the waged or salary of employees. It can also impart entrepreneurship training at various levels (even the school/college levels) by including it in the curriculum.

Conclusion

It is concluded that the development of entrepreneurial talent is important to sustaining a competitive advantage in a global economy that is catalyzed by innovation. Increasing in the level of entrepreneurial traits could enlarge the number of potential and actual entrepreneurs who in turn could generate more employment and create national wealth. The suggestion may be carried out for motivating the members of Self-Help group to become the entrepreneurs who can help in building a self-sufficient country by contributing their efforts to the Indian economy as a whole. Entrepreneurs are the back bone for the growth of the country.

References

1. Anchal Soni (2015). Role of Self-Help Groups in Women Entrepreneurship Development: A Case Study of Jalandhar District, Punjab. *Advances in Economics and Business Management (AEBM)*, Vol. 2, Issue 15, pp. 5-9.
2. Anju, G. S. and Raju, J. K. (2014). Challenges of SHG's Rural Women Entrepreneurship with Special Reference to Davangere District. *Global Journal of Commerce and Management Perspective*, Vol. 3 (5), pp. 15-21.
3. Ansuman Sahoo (2013). Self-Help Group & Woman Empowerment: A study on some selected SHGs. *International Journal of Business and Management Invention*, Vol. 2(9), pp. 25-31.
4. Brinda Shree and Jayakumar (2015). A Study on Women Entrepreneurship in Salem District with Special Reference to Self-Help Groups. *International Journal of Emerging Technology in Computer Science & Electronics (IJETCSE)*, Vol. 15(1), pp. 38-45.

Brand Loyalty: Bata Products in Tiruchirappalli Town

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Abstract

Brand loyalty is how people think about the products and wants to continuously buy the same product or getting services repeatedly now and in the future. When the consumers continuously buy products from the same manufacturer or a same supplier it is called Brand Loyalty. Brand Loyalty is collecting the customer's opinion regarding their needs, wants in order to build and make a cordial relationship with them. Even though the brand loyalty can cost more, they help the organization or a firm to form a relationship between the brand and the customer.

Introduction

The victory of a business organization depends upon its ability to attract and retain its customers. Nowadays, retaining in the same product or same brand is a difficult one. Brand loyalty plays a vital role in the market to retain their customers. Customers will continuously use the same brand or product when they are fully satisfied with the brand or product. Brand loyalty is how people think about the products and wants to continuously buy the same product or getting services repeatedly now and in the future. When the consumers continuously buy products from the same manufacturer or a same supplier it is called Brand Loyalty. Marketing tools can be used to increase attraction between the consumer and the brand. These tools increase the consumers' emotion to attach with the brand or products and this will create the Brand loyalty. Relationship development and maintenance, such as cordial relationship with the employees and maintenance will improve the Brand loyalty.

Brand Loyalty assists to acknowledge and support customers; this can be a essential component for purchasers for repurchase. The most aim of the whole loyalty is to make a customer loyalty towards a whole. Brand Loyalty is collecting the customer's opinion regarding their needs, wants in order to build and make a cordial relationship with them. Even though the loyalty program can cost more, they help the organisation or a firm to form a relationship between the brand and the customer.

Salem Mohammad Zedan Yehia and Cermelli Massimo (2016) studied about the brand loyalty among mobile phone users in the Basque region of Spain. This paper attempts to examine brand loyalty among mobile phone users the case of the main six mobile phone companies operating in the Basque region of Spain. An empirical study was conducted to collect the primary data using a

questionnaire as a tool in order to test the hypotheses. The finding proved that there is a low loyalty toward phone mobile companies according to users' attitudes. In addition, there is no loyalty among mobile phone users toward companies they deal with according to users' behaviors.

Rajdeep Singh (2016) studied the factors affecting brand loyalty in the footwear industry in Ludhiana district. The study was an Endeavour to investigate the factors that affect brand loyalty in the footwear industry. A sample of 100 respondents was selected from the Ludhiana region. Statistical techniques of correlation and multivariable regression were used. The results depicted that out of the total fourteen identified factors, twelve factors had significant relationship with brand loyalty. Proper pricing techniques and customer satisfaction were the dominant variables in affecting brand loyalty towards a footwear brand.

Arvidsson (2016) has conducted a quantitative research into brand awareness and brand loyalty for the brand Apple in Denmark. The research paper had the aim to examine what the main reasons behind Apple's success in Denmark are in spite of the fact that the company has no advertising efforts. It made use of theories about Branding such as brand awareness, brand religion, brand equity and brand personality and Consumer behaviour such as consumer decision making process when buying a product. The study concluded that most participants became aware of the company through recommendations from their close circle of friends and family. It also showed that they would also recommend either 2-3 or all of the products from the brand. This led to the conclusion the Apple does not need to make use of marketing and advertising in Denmark in order to be successful because of the strong personal recommendation between the consumers.

Objectives of the study

1. To analyze the Brand Loyalty towards Bata product.
2. To find out the price satisfaction of the customer towards Bata products.
3. To find out the variety of the Bata products preferred by the customers.

Hypotheses

1. There is no significant association between price satisfaction and the spending power of the respondents towards the Bata products.
2. There is no significant association between the aware of different varieties of Bata products and the services of the Bata products.
3. There is no significant association between the satisfaction level and the continuous buying of the Bata products.

Methodology

The researcher had adopted simple descriptive design. Descriptive design completely portrays the characteristics of a particular situations, groups or communities. Convenience sampling method has been used to select the sample

customers of Bata products. The primary data were collected through structured questionnaire from the five different branches of Bata showrooms in Trichy City.

Statistical Tools of Data

Primary data collected from the respondents have been classified and tabulated for the purpose of analysis. With the help of Statistical Package for Social Science (SPSS) software, Chi-square test and ANOVA test used for analysis.

Result and Discussion

Table-1: Spending power and the price satisfaction of the respondents

Spending power of the respondents	Price satisfaction of the respondents					Statistical inference
	Highly satisfied	Satisfied	Neutral	Dissatisfied	Total	
Less than 500	2	6	8	0	16	X ² = 19.497 DF = 9 0.021 < 0.05 Significant
501-1000	9	40	8	1	58	
1001-1500	9	13	2	0	24	
1500 above	0	1	1	0	2	
Total	20	60	19	1	100	

Source: Primary data

The above table shows that among 100 respondents, maximum of 60 respondents are satisfied with the price of the Bata products; among the 60 satisfied respondents maximum of 40 respondents are spending between rupees 501 and 1000. 20 respondents are highly satisfied with the price of the Bata products and nine respondents are spending rupees 1500 above and another nine respondents are spending rupees 501 and 1000. 19 respondents are neutral about the price of the Bata products and only one respondent is dissatisfied with the price of the Bata products.

Finding

1. Among the 60 per cent satisfied respondents, maximum of 40 per cent respondents are spending between rupees 501 and 1000 for purchasing the Bata products.
2. A minimum of one per cent respondent is dissatisfied with the price of the Bata products; and 2 per cent respondents are spending above 1500.

Testing of hypothesis

Null hypothesis: There is no significant association between price satisfaction and the spending power of the respondents towards the Bata products.

Alternative hypothesis: There is a significant association between price satisfaction and the spending power of the respondents towards the Bata products.

Statistical tool to be used: Chi-square test

Inference: Table-1 shows that the Pearson Chi Square value is 19.497 for 9 degrees of freedom with a significance value of 0.021 ($p < 0.05$). so, the null hypothesis is cannot be accepted and the alternative hypothesis is accepted. Hence it is inferred that there is a significant association between price satisfaction and the spending power of the respondents towards the Bata products. There is a significant association between the price satisfaction and the spending power of the respondents towards the Bata products.

Table-2: Aware of different varieties of Bata products and services of the Bata products

Aware of different varieties of Bata products	Respondents opinion regarding services of the Bata products					Statistical inference
	Strongly Agree	Agree	Neutral	Disagree	Total	
Strongly agree	8	10	0	0	0	$X^2 = 23.472$ DF = 12 $0.024 < 0.05$ Significant
Agree	8	49	10	0	1	
Neutral	1	7	4	1	0	
Disagree	0	1	0	0	0	
Total	17	67	14	1	1	

Source: Primary data

Table shows that among 100 respondents, 67 respondents are agreed with the services of the Bata products and 68 respondents are agreed with the aware of different varieties of Bata products. Among the 67 agreed respondents regarding services of the Bata products, maximum of 49 are agreed with the aware of different varieties of Bata products. 17 respondents are strongly agreed with the services of the Bata products, 14 respondents are neutral about the services of the Bata products; one respondent is disagreed and another one respondent is strongly disagreed with the services of the Bata products. 18 respondents are strongly agreed with the aware of different varieties of Bata products, 13 respondents are neutral about the aware of different varieties of the Bata products, and one respondent is disagreed with the aware of different varieties of the Bata product.

Finding

Among the 67 per cent of agreed respondents regarding the services and 68 per cent of agreed respondents regarding the aware of different varieties of the Bata

products 49 per cent of respondents are agreed both services and aware of different varieties of the Bata products. A minimum of only one per cent of respondent is disagreed with the services of the Bata products.

Testing hypothesis:

Null hypothesis: There is no significant association between the aware of different varieties of Bata products and the services of the Bata products.

Alternative hypothesis: There is a significant association between the aware of different varieties of Bata product and the services of the Bata products.

Statistical tool to be used: Chi-Square Test

Inference: Table-2 shows that the Pearson Chi Square value is 23.472 for 12 degrees of freedom with a significance value of 0.024 ($p < 0.05$). so, the null hypothesis is cannot be accepted and the alternative hypothesis is accepted. Hence it is inferred that there is a significant association between price satisfaction and the spending power of the respondents towards the Bata products.

There is a significant association between the price satisfaction and the spending power of the respondents towards the Bata products.

Table-3: Satisfaction level and the continuous buying of the Bata Products

Satisfaction level of the respondents	Respondents opinion regarding continuous buying of the Bata products			Statistical inference
	Yes	No	Total	
Highly satisfied	16	0	16	$X^2 = 21.253$ DF = 4 $0.000 < 0.05$ Significant
Satisfied	43	26	69	
Neutral	2	8	10	
Dissatisfied	1	3	4	
Highly dissatisfied	0	1	1	
Total	62	38	100	

Source: Primary data

Table shows that among the 100 respondents, 62 respondents are continuously buying the product and a maximum of 43 respondents are satisfied with the Bata products, 16 respondents are highly satisfied with the Bata and they continuously buying the Bata products. Two respondents are neutral about the product and one respondent is dissatisfied with the Bata product. 38 respondents are not continuously buying the product, a maximum of 26 satisfied with the Bata product and they are not continuously buying the Bata products.

Finding

A maximum of 69 per cent of the respondents are satisfied with the Bata products among this 43 per cent of the respondents are continuously buying the Bata products.

A minimum of only one per cent of the respondent is highly dissatisfied with the Bata product and they are not continuously buying the Bata products.

Testing of hypothesis:

Null hypothesis: There is no significant association between the satisfaction level and the continuous buying of the Bata products.

Alternative hypothesis: There is significant association between the satisfaction level and the continuous buying of the Bata products.

Statistical tool to be used: Chi- square test

Inference: Table-3 shows that the Pearson Chi square value is 21.253 for 4 degrees of freedom with a significance value of 0.000 ($p < 0.05$). So, the null hypothesis is cannot be accepted and the Alternative hypothesis is accepted. Hence it is inferred that there is a significant association between satisfaction level and the continuous buying of the Bata products.

There is a significant association between the satisfaction level and the continuous buying of the Bata products.

Conclusion

Bata is a very famous brand. They provide quality products. Users of the Bata products are satisfied with the quality, guarantee period, packaging etc. But the price of the Bata products considered to be high and this is a limitation of the Bata products and it will reduce the growth of the company. Therefore, it is suggested that they have to reduce the price of the products for more sales and turnover. More promotional activities such as advertisement, gift offers, discount offers can improve the sales.

References

1. Salem Mohammad Zedan Yehia and Cermelli Massimo (2016). An experiment on brand loyalty among mobile phone users in the Basque region of Spain. 2016, *Marketing and Management Innovation*, 1: 32-47.
2. Rajdeep Singh (2016). Factors affecting brand loyalty in the footwear industry: A study on Ludhiana district. *International Journal of Research - Granthaalayah*, 4: 139-149.

Customer's Decision-making Styles in Different Retail Formats with Reference to Central Kerala, India

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Abstract

The Indian retail market is among top five retail markets in the world by economic value. As Kerala contributes a major share in the overall Indian retail sector and stands one among the major consumer states, it is very essential to study the customer's decision-making styles in organized and unorganised retailing. The Consumer dynamics in Kerala is changing and the retailers need to keep track this and formulate appropriate proactive planning to get the grip in this upcoming market.

Keywords: Retail market, Customer, Decision-making, Organised and Unorganised retail formats

Introduction

Retailing in India is one of the pillars of its economy and accounts for 14 to 15 percent of its GDP. The Indian retail market is estimated to be US\$ 450 billion and one of the top five retail markets in the world by economic value. India is one of the fastest growing retail markets in the world, with 1.2 billion people. India has topped the A.T. Kearney's annual Global Retail Development Index (GRDI) for the third consecutive year, maintaining its position as the most attractive market for retail investment. In January 2012, India approved reforms for single-brand stores welcoming anyone in the world to innovate in Indian retail market with 100% ownership, but imposed the requirement that the single brand retailer source 30 percent of its goods from India. Indian government continues the hold on retail reforms for multi-brand stores.

As of 2013, India's retailing industry was essentially owner manned small shops. In 2010, larger format convenience stores and supermarkets accounted for about 4 percent of the industry, and these were present only in large urban centres. India's retail and logistics industry employs about 40 million Indians (3.3% of Indian population). The Economist forecasts that Indian retail will nearly double in economic value, expanding by about \$400 billion by 2020.

Kerala is one among the Indian states which resisted central ministry's new FDI policy, but it's a true fact that, it will be imposed in all states with in short time.

As Kerala contributes a major share in the overall Indian retail sector and also as one of the main consumer states, it is very essential to study the customer's decision making styles in different (organized and unorganised) retailing.

Statement of the Research Problem

Kerala is a consumer state than a producer state. Kerala depends up on other states for day to day food and other requirements. Here lies the importance of retail shops. State consists of lot of retail outlets which are organised and unorganised. From where to buy and use is a question. It's all up to the consumer. In a market consumer is the king he will decide when to buy, what to buy, from where to buy and all.

There are certain trends in consumer behaviour that have direct and significant impact on the business strategy and the profitability of retail business. These trends relate to the changing demography increasing individualisation, increasing computerisation, increased mobilisation, increased demand in terms of sustainability and dematerialisation.

A consumer prefers organised retail outlets for FMCG products that are bought in large quantities and for larger duration of time. They also perceive it as a family outing and are drawn towards it due to its convenience variety and special offers. A consumer prefers unorganised retail outlets and has low shelf life and is consumed on a daily basis. Logistical convenience and a sense of personalisation are key drivers for consumers to make a shopping in an unorganised retail outlet. Why some consumers prefer unorganised retailers, while others shop from organised retailers. There are some factors such as influencing factors , rate of satisfaction received, price factors, shopertainment, ambience , quality of products, variety of products etc. For finding out the reasons behind, researcher conducted this study entitled-the customers decision making styles in different (organized and unorganised) retailing.

Scope of the Study

The measurement of consumer attitude, behaviour and customer satisfaction is a rapidly growing area of marketing research. Companies have to come realise that it may be much more expensive to attract new customers than to retain existing customers. Furthermore some customers such as those who are heavy users of the product or service, merit relatively heavier efforts to ensure a high level of satisfaction. Customer satisfaction and consumer behaviour studies have become integral part of the retention and loyalty programs of many firms.

This study was planned to cover the unorganised and organised retailing in central Kerala. The sale and consumption pattern of different retail outlets, intensive interaction with consumers to know about their shopping experiences, attitude, preference, selection and purchase of different consumables, user satisfaction, shopertainment etc. came under the scope of the study. It was also decided to

meet the shop owners to know about the customer responses about their shop and also to know how happy he is in current retail status.

Objective of the Study

To study the customers decision making styles in organized and unorganised retailing. It includes:

- Price consciousness
- Quality consciousness
- Recreational facilities
- Confused by over choice
- Novelty consciousness
- Variety consciousness

Hypothesis for the Study

H0: There is no significant difference in customer's decision-making styles in organized and unorganised retailing.

Research Methodology

1) Sample Design:

Universe: The whole customers from organized and unorganized retailers in Thrissur and Ernakulam district of Kerala state.

Sample size: the sample size is delimited as the time period for the research is very short. So researcher conducted the study on 200 samples selected 100 each from Thrissur and Ernakulam district having shopping experience from both organized and unorganized retailers.

Sampling technique: For the study, judgement sampling, one of the non-probability sampling techniques was used. The researcher employed his own judgment about who to include in the sample frame.

2) Data Collection:

The study requires both primary and secondary data. Primary data was collected using questionnaires and secondary data was collected from books, journals, articles, web search and works of similar nature.

Tools for primary data collection: A questionnaire including likert scales, semantic scales and CMT was prepared to collect primary data from the customers.

Method of data collection: Intercept surveys and door to door survey was used to collect the data.

3) Analysis and presentation of data:

For analysing the collected data statistical tools such as Correlation Test and T-test were used along with SPSS software. Tables were used to present the results.

Review of Literature

Manoj Trivedi (2008) in his paper entitled “From Traditional Markets to Shopping Malls. A paradigm shift” holds the view regarding of the fast approaching retail boom scenario that it is likely to happen sooner than later. The author discussed the impact of the same on the Indian Traditional retail outlets with its likely positive and negative impact. The author concludes that where the organized sector poses a cutthroat competition for the *kiranas* the fact still remains that India being a country with diversified social classes there is a scope for both to survive. The emergence of a developed retail sector will pose a competition rather than a threat to the traditional stores which would help these stores change their outlook and ways of working.

Ajay Shah (2009) in the PhD thesis titled “Consumer behaviour towards shopping malls vis-à-vis Mom and Pop shops” done research in western India especially cities of Gujarat. In his research he examines the experience of consumers towards shopping malls against Local stores.

Swaroop Chandra Sahoo and Prakash Chandra Dash (2010) titled ‘Consumer Decision Making styles in shopping malls- An empirical study in Indian Context’ identified six decision making styles in Indian environment. These decision making styles are price consciousness, quality consciousness, recreational facilities, confused by over choice, novelty consciousness and variety consciousness. They also added that it is very crucial to study the decision making behaviour of Indian customers as more and more domestic and international players are entering in to Indian retail sector. So it is very important to study the decision making styles of customers.

Poonam Kamboj (2012) published paper titled “Retail Industry: Its Growth, Opportunities and Challenges” has found out that it is also the second largest industry in US in terms of numbers of employees and establishments. There is no denying the fact that most of the developed economies are very much relying on their retail sector as a locomotive of growth. The India Retail Industry is the largest among all the industries, accounting for over 10 per cent of the country’s GDP and around 8 per cent of the employment

Smitha’s (2012) study entitled factors influencing the buying behaviour of organized retail customers: “A study on food and general stores in Vishakapattanam” concluded that there are equal spaces for both organized and unorganized retailers in an emerging city like Vishakapattanam. Although the customers would utilize the services of an unorganized retailer in their neighbourhood for fulfilling their basic needs, they are also aware and conscious of the benefits and advantages associated with an organized retailing .So from the above statement it is clear that the consumers are well awarded about the factors what they are being influenced to buy or shop from a particular retail outlet.

Data Analysis

H₀: There is no significant difference in customer's decision-making styles in Organised and Unorganised retailing.

1. Price consciousness

Table-1: T test

Pair 1	Mean	N	SD	Std. Error Mean	Correlation	df	t	sig
Organised	17.20	200	1.665	0.118	-0.176	199	38.936	0.000
Unorganised	10.90	200	1.303	0.092				

Here correlation is negative. There is an inverse relation. Here p- value is less than 0.05, so we reject the hypothesis. So there is significant difference in customer's price consciousness in decision making styles in organised and unorganised retailing.

2. Quality consciousness

Table-2: T test

Pair 1	Mean	N	SD	Std. Error Mean	Correlation	df	t	sig
Organised	17.40	200	2.015	0.142	0.556	199	56.196	0.000
Unorganised	9.80	200	2.045	0.145				

Here p-value is less than 0.05 reject the hypothesis. So there is significant difference in customer's quality consciousness in decision making styles in organised and unorganised retailing.

3. Recreational facilities

Table-3: T test

Pair 1	Mean	N	SD	Std. Error Mean	Correlation	df	t	sig
Organised	12.40	200	0.919	0.065	-0.467	199	32.428	0.000
Unorganised	7.60	200	1.500	0.106				

Here correlation is negative. That is there is an inverse relation. Here p- value is less than 0.05 so, reject the hypothesis. So it is clear that there is significant difference in customer's decision making styles in organised and unorganised retailing with respective of recreational facilities.

4. Confused by over choice

Table-4: T test

Pair 1	Mean	N	SD	Std. Error Mean	Correlation	df	t	sig
Organised	13.30	200	1.851	0.131	0.022	199	43.986	0.000
Unorganised	6.50	200	1.207	0.085				

Here p-value is less than 0.05 reject the hypothesis. Therefore there is significant difference in customer's decision making styles in organised and unorganised retailing with respect to choices available at retail stores.

5. Novelty consciousness

Table-5: T test

Pair 1	Mean	N	SD	Std. Error Mean	Correlation	df	t	sig
Organised	8.00	200	1.268	0.090	-0.440	199	22.684	0.000
Unorganised	4.80	200	1.080	0.076				

Here correlation is negative. There is an inverse relation between the variables. Here p- value is less than 0.05 so we can reject the hypothesis. Also we can say that there is significant difference in customer's decision making styles in organised and unorganised retailing with respect to novelty consciousness.

6. Variety consciousness

Table-6: T test

Pair 1	Mean	N	SD	Std. Error Mean	Correlation	df	t	sig
Organised	8.00	200	.897	0.063	0.559	199	49.798	0.000
Unorganised	4.40	200	1.203	0.085				

Here p-value is less than 0.05, so reject the hypothesis. Therefore there is significant difference in customer's decision making styles in organised and unorganised retailing with respect of variety consciousness.

7. Aggregate Result for Hypothesis

Table-7: T test

Pair 1	Mean	N	SD	Std. Error Mean	Correlation	df	t	sig
Organised	76.32	200	4.016	0.284	0.115	77.179	199	0.00
Unorganised	43.30	200	5.012	0.354				

To study the customer decision making styles following factors were considered. Price consciousness, quality consciousness, recreational facilities, confused by over choice, novelty consciousness and variety consciousness. Here p-value is less than 0.05, reject the hypothesis, H_0 : There is no significant difference in customer's decision-making styles in organised and unorganised retailing. So we can assume that there is significant difference in decision making styles in both retailing.

Conclusion

The following factors were considered for the test, Price consciousness, Quality consciousness, Recreational facilities, Confused by over choice, Novelty consciousness and Variety consciousness. Here p-value is less than 0.05, reject the hypothesis, H_0 : There is no significant difference in customer's decision-making styles in organised and unorganised retailing. So we can assume that there is significant difference in decision making styles in both retailing.

Organised retailers can reduce the cost of products using better utilisation of indigenous or local resources available to them. By this action they can stimulate local small scale industries and farmers. As a result consumers get fresh products in desired quality at cheap prices. Also this will increase the standard of living of local people.

In order to attract customers, good infrastructure facilities and hygiene premises should be maintained by every unorganised retailer. In order to retain existing customers and to attract new customers, the retailers have to offer excellent promotional schemes and discounts like organised retailers.

This study mainly focused on consumers decision making styles in both retail types. The results of the study revealed that there are equal spaces for both organised and unorganised retailers in an emerging retail hot spot like Kerala, especially in central Kerala. Although the consumer would utilise the services of an unorganised retailer in their neighbourhood for fulfilling their basic needs, they are also aware and conscious of the benefits and advantages associated with an organised retail outlet. Also the customer's attitudinal factors force them to have diversified products at various shopping spots. In this situation retailers should be vigilant in adopting more consumer friendly marketing strategies in terms of best quality products and services continuously to the consumer.

Kerala is now retailers own land. The Consumer dynamics in Kerala is changing and the retailers need to keep track this and formulate appropriate proactive planning to get the grip in this upcoming market. Also opening up of FDI in retail would aid in this endeavour and lead to improvements in infrastructure, technology and employment opportunities, and also benefit the overall economy. It is concluded that the future of Retailing in Kerala looks bright and Marketing is not a function, it is the whole business seen from the consumer's point of view. Let's wait for a retail revolution.

References

1. Ajay D. Shah, Consumer Behaviour towards shopping malls vis-a-vis Mom and Pop Stores. PhD thesis submitted to Saurashtra University in 2007.
2. Ajaz Ahmed and Surehramana Mayya (2012). Impact of shopping malls on the unorganized retail sector: A case study of Manglore Region. *Indian Journal of Marketing*, Sep 2012, pp. 31-40.
3. Dash, Prakash Chandra, Indian Retail Industry-Opportunities, Challenges, and Strategies. www.indianmba.com/FC689/fc689.html
4. Gaur, S. S. and Vaheed, K. A. 2002. Study of buying behavior for branded fine rice. *Indian J. Market.* Vol. 32(7), pp. 33-36.
5. Goyal and Aggarwal (2010). Shopping Experiences: A case study of organised retail sector in India - Retail Management an Indian perspective. Excel Publications, New Delhi.
6. Sahoo, Swaroop Chandra and Dash Prakash C (2010). Consumer Decision making styles in shopping malls – An empirical study in the Indian context. *Indian Journal of Marketing*, Vol. 12, pp. 21-33.
7. Smitha V. G, (2012). Factors influencing the buying behaviour of organized retail customers: A study on food and general stores in Vishakapattanam. *Indian Journal of Marketing*, pp. 23-33.
8. Subhalakashmi (1990). Consumer Behaviour towards selected agro-processed products: A micro level study of Trichur District. MSc. Thesis, College of Cooperation, Banking and Management, Vellanikkara. p. 123.
9. Trivedi, Manoj. From Traditional Markets to Shopping Malls. A paradigm shift. www.indianmba.com/FC745/fc745.html
10. Verma, Sanjeev (2007). An Exploratory Study of Consumer Preferences for Retail Store Selection in Mumbai. *Indian Retail Review*, Vol. 1, Issue 2, December
11. <http://en.wikipedia.org/wiki/Retail>
12. <http://retailmantras.blogspot.in/>
13. <http://scholar.google.co.in/>
14. <http://shodhganga.inflibnet.ac.in/>
15. <http://shodhgangotri.inflibnet.ac.in/>
16. <http://www.emeraldinsight.com/>

A Facilitating Means of Financial Transactions through ATMs: Prospects and Challenges

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Abstract

The rapid growth in the use of ATMs in Tiruchirappalli District offers opportunities to banks to reduce the workload of the employees, free from human errors, avoid overcrowding at the branches in the banking operations and extend their services twenty-four hours and seven days a week and three sixty-five days in a year to its customers. The banks should monitor the preferences of customers in advance for satisfying them in all spheres of their demands and requirements. Banks should focus on the important aspects of security and privacy as well as the efficient operation of ATMs. Banks should also concentrate on old age people and rural people for utilization of ATMs at the maximum extent. Banks must also take necessary steps to minimize the fear, shyness, theft and the fear of fraud. Finally, the very important need of the hour is an alternative arrangement for power failure for all ATMs and the availability of security guards to every ATM centres to ensure risk free transactions round the clock.

Keywords: ATM, Work load, Human error, Risk free transactions.

Introduction

Automated Teller Machine (ATM) is one of the most important and recent innovations that can offer significant benefits to both banks and their customers effectively. ATMs are embedded systems for finance related services that enables automation services to withdraw cash at more convenient times and places than banking hours at branches that were previously completed manually; ATMs can reduce the costs of servicing customers' demands. These potential benefits are multiplied when banks share their ATMs, allowing customers of other banks to access their accounts through another bank's ATM.

The ATM flourishes within societies where time is precious and money readily available. This culture is composed of individuals, who have personal bank accounts and access to a wide range of technology for these people. ATMs are convenient and reliable everyday artifacts push a few buttons and get your money. As ATMs pervade new borders and pervade different cultures. It urges the need to understand the role of cultural characterization on people's perception of attitudes towards, and action on, the machine. This understanding is instrumental in facilitating technology uptake and improving design, localization, or the process of infusing a specific cultural context into products designed for different cultures.

History of ATM

Automated teller machine (ATM) was developed by Luther George Simjian and installed in 1939 in New York, but removed after 6 months due to lack of customer acceptance. Thereafter the history of ATM paused for over 25 years, until De La Rue developed the first electronic ATM, which was installed first in Enfield town in north London on June 27, 1967 by Barclay's Bank. The first working ATM was installed in New York. The first machine followed by that the deal was signed with the bank to develop six ATMs on a trial basis, followed by 50 more machines.

ATMs have become the order of the day in banking. Though they were evolved as novel cash dispensers, now they have emerged as a marketing tool to target the masses. There are about 9500 off-site and on-site ATMs of many banks are nothing but virtual branches, as customers can conduct any transactions, through the touch screens. They are user friendly and they have mass acceptability. They can effectively reach out a large customer base at low cost. At present, banks have started outsourcing and sharing of ATM services to reduce cost. Most banks are used to cross-sell other products also so as to meet the varied requirements of customers. Banks have started dispensing railway tickets, air tickets, movie tickets etc. through ATMs. Voice activated ATMs, ATMs with fingerprint scanning technology, etc. are on the move. If they become operational, they can save the customers from the hassle of carrying a card. In future, a bank's ATM would function like a kiosk delivering more on non-cash transactions, thereby reducing fixed and operating costs.

ATM Functionality - How it works?

Automated Teller Machine (ATM) is a computerized telecommunication device that provides the customer of a financial institution with access to financial transactions in a public space without the need for a bank teller.

ATM card issue procedure

The customer is identified by inserting a plastic ATM card with a magnetic strip. The card contains a unique number and some security information, such as expiration date. Security is provided by the customer entering a Personal Identification Number (PIN). An ATM card is issued only to an existing customer who belongs to a bank. The customer, who wishes to avail of the facility, has provided an application form by the branch. The filled-up form is forwarded to authorized by the concerned branch manager for a central office of the bank to be dealt with ATM card issuing department.

ATM Operations

The Automatic Teller Machine (ATM) generally performs the following functions:

- PIN change
- Balance Enquiry

- Cash Withdrawal/ Fast cash
- Cash deposit
- Cheque Deposit
- Mini Statement
- Cheque Book Request
- Funds Transfer

Value Added Transactions

- Mobile recharge
- Utility bill payments
- Buying mutual funds
- Charity and donations
- Buying internet packs or airline tickets or cinema ticket

Statement of the problem

ATMs provide excellent service to its users from various forms that is deposits or withdrawals of cash, making balance enquiry, obtaining an account statement for the previous limited transaction, inter account transfer of funds and making utility payment of bills (e.g.) electricity, telephone, etc., The success of every innovative technology providing easy operation, educating, convincing, stimulating desire to the users regarding utilization of such technology. The improved customer service the bank has become very important for survival and growth in the emerging deregulated financial markets. The banks are competing with each other to offer multifarious and diversified services to the customer to widen their client base. In this research, the researcher made an attempt to find out the level of satisfaction and the problem faced by the users towards using ATMs.

Scope of the study

This study is repleted with analyzing several dimensions of customer satisfaction on personal factors, social factors, technological factors and institutional factors.

Overall objectives

The overall objective is to inquire into the performance, prospects and challenges facing the customers using ATMs in Tiruchirappalli District.

Specific objectives

1. To examine the essential dimensions of ATM service provided by the public and private sector banks in Tiruchirappalli District.
2. To ascertain the frequency of usage of ATM by the users.
3. To check whether the public and private sector banks maintain the balance in establishing ATM centers in rural, semi urban and urban areas.
4. To find out the problems faced by the users at the time of using the ATMs.

5. To ascertain the reliability of ATM services.
6. To identify the strengths and weaknesses of ATM services provided by public and private sector banks and to offer suggestions.

Hypotheses

The study took into consideration the four factors such as personal, social, technological and institutional factors with regards to the problems of the ATM users. Any useful hypothesis will enable predictions by logical reasoning.

- Age of the ATM users has not significantly made an impact in the utilization of ATMs.
- Occupational status of the users has not significantly been affecting the frequency to use the technology.
- Safety and protection against fraud in ATMs have not significantly made an impact on the satisfaction of the customers.
- Inadequate knowledge of ATM users has not significantly affected the decision towards the use of the technology.
- Alternative arrangement made at the time of power failure in ATM centre has not significantly affected the satisfaction level of the customers.
- Challenges faced by the users have not significantly affected the satisfaction on ATMs.
- Insecure feeling, chances of fraud in ATMs has not significantly affect the satisfaction of using ATMs.

Research Methodology

The present study is of analytical and exploratory in nature, accordingly the study has been made of primary as well as secondary data. It includes the choice of study area, the sampling technique and tools of analysis.

Sampling Techniques

The two stages cluster sampling technique is adapted to select the respondents for the study. In first stage 50 ATMs were selected randomly using simple random sampling method and in the second stage twelve ATM users were selected using a systematic random sampling method. The researcher went to the selected ATM center and remained there and met twelve systematically selected respondents. The chronological order of visiting the ATM is taken as the case number of the sample frame. Totally six hundred respondents were provided with the interview schedule among them hundred were found to be default. Those hundred respondents were rejected from the sample and finally five hundred respondents are selected as sample for the study.

Tools of Analysis

The following statistical tools, namely, correction analysis, chi-square, total variance factor analysis, principal compound analysis and co-efficient matrix were used to arrive at a meaningful conclusion.

Limitations of the study

1. The study was made with the use of the available data provided by the respondents.
2. Frequency of usage of ATMs were very limited in rural areas, it was a problem for the researcher to meet the respondents in the ATM centers in person.
3. Some of the employees and businessmen were met in the ATM centers were not patient enough due to their task and they were not co-operating properly.
4. A few respondents hesitate to give all the information, especially income details, it necessitates much time to explain about the study.

Findings

1. The highest number of the respondents (46.0 per cent) was from semi-urban area, 42.4 per cent of the respondents were from rural area and 11.6 per cent of the respondents were from urban area using public sector bank ATMs.
2. It is found that, 44.8 per cent of the respondents were from urban areas, 34.8 per cent respondents were from semi-urban areas and remaining 20.4 per cent respondents were from rural areas using private sector bank ATMs.
3. The majority of the female respondents, (53.6 per cent) were using the public sector bank ATMs and 46.4 per cent of the male respondents were using the public sector bank ATMs.
4. Large number of male respondents (58.8 per cent) were using the private sector bank ATMs and 41.2 per cent of the female respondents were using private sector bank ATMs.
5. Thirty per cent of the respondents belong to the age of 26 and 35 are using the public sector bank ATMs and 34.8 per cent of respondents belong to the age of 18 and 25 are using private sector bank ATMs.
6. A very few numbers of (1.2 per cent) respondents were from above 60 years are using public sector bank ATMs and 0.4 per cent of them are using private sector bank ATMs.
7. Reasonable number of (38.0 percent) illiterate respondents have used public sector bank ATMs and a very few of them use private sector bank ATMs.
8. A considerable number of (30.8 per cent) the respondents were private employees and they are using public sector bank ATMs and 24.8 per cent were students using private sector bank ATMs.
9. Half a per cent of the respondents earning below Rs.5,000 per month use private sector bank ATMs and 32.4 per cent of the respondents earning below Rs. 5,000 use public sector bank ATMs.
10. Forty-seven per cent of the respondents of the public sector banks have opened their accounts between the year 2001 and 2010 whereas, 46 per cent of the respondents of the private sector banks have opened their accounts between the year 2001 and 2010.

11. Forty-four per cent of the respondents of the private sector bank and 42.4 per cent of the respondents of the public sector bank have opened their accounts after the year 2010.
12. The highest number of the respondents (95.2 per cent) from private sector banks and 94.4 per cent of the respondents from public sector banks having saving bank accounts.
13. A very few numbers of the respondents (5.6 per cent) from public sector banks and 4.8 per cent of the respondents from private sector banks have current accounts.
14. Forty-five per cent of the respondents from private sector banks and 42.0 per cent of the respondents from public sector banks use their ATM cards whenever necessary, they do not follow any periodical intervals.
15. The majority of the respondents (57.2 per cent) from private sector banks and 55.2 per cent of the respondents from public sector banks use ATM cards for a period between 2 and 5 years.

Personal Factor

1. A considerable number of respondents (67.2 per cent) from private sector banks and 57.6 per cent of public sector bank respondents were satisfied with the usability of ATMs.
2. Forty-two per cent of the respondents from the public sector banks and 39.2 per cent of the respondents from the private sector banks were satisfied with statement request.
3. A reasonable number of (44.0 per cent) respondents from the private sector banks and 42.8 per cent the respondents from the public sector banks were satisfied with account activity enquiry.
4. Forty-four per cent of the respondents from the public sector banks and 42.4 per cent of the respondents from the private sector banks were satisfied with multiple usages on ATMs.
5. Thirty-four per cent of the respondents from the public sector banks and 32.8 per cent of the respondents from the private sector banks were satisfied with withdrawal limit in ATMs.
6. Fourteen per cent of the respondents from the private sector banks and 12.4 per cent of the respondents from the public sector banks were dissatisfied with withdrawal limit in ATMs.
7. Forty-two per cent of the respondents from the private sector banks and around 35 per cent of the respondents from the public sector banks were satisfied with amount transfer facility.
8. Forty per cent of the respondents from the private sector banks and about 36 per cent of the respondents from public sector banks were satisfied with the assistance given by the bank at the time of usage.

9. Thirty-seven per cent of the respondents from public sector banks and around 36 per cent of the respondents from private sector banks were satisfied with the operating system of ATMs.
10. Forty per cent and 39 per cent of the respondents from the public sector banks and the private sector banks were satisfied with the delivery of ATM card by the banks respectively.

Institutional Factors

1. Forty-five per cent of the respondents from the private sector banks and 35 per cent of the respondents from the public sector banks satisfied with the benefits of twenty four hour banking facilities offered by banks through ATM centers.
2. Forty-six per cent of the respondents from the private sector banks and 49.2 per cent of the respondents from the public sector banks were satisfied with quality of currency issued through ATMs.
3. Thirty-eight per cent of the respondents from the private sector banks and 36.4 per cent of the respondents from the public sector banks were satisfied with the service quality of ATM centre personnel.
4. Ten per cent of the respondents from private sector banks and 8 per cent of the respondents from public sector bank were dissatisfied with the quality of service offered by the ATM personnel.
5. Forty per cent of the respondents from the public sector banks and around 34 per cent of the respondents from the private sector banks were satisfied with loading up of ATMs with cash periodically.
6. Thirty-eight per cent of the respondents from both the public as well as the private sector banks were satisfied with the availability of security in the ATM centres.
7. Twelve per cent of the respondents from the private sector banks and 9.6 per cent of the respondents from public sector banks were dissatisfied with the availability of security in the ATM centres.
8. Thirty-nine per cent of the respondents from the private sector banks and around 35 per cent of the public sector banks respondents were satisfied with inter-connectivity of ATMs.
9. Thirty-six per cent of the respondents from the public sector bank ATM users and 32.4 per cent of the respondents from the private sector bank ATM users were satisfied with charges collected by the bank for inter connectivity of ATMs.
10. Thirty-nine per cent of the users from the public sector banks and 36.9 per cent of the private sector banks ATM users were satisfied with protection against fraud in ATMs

11. Thirty-three per cent of the public sector bank users and 34.4 per cent of the respondents from the private sector bank users were satisfied with the pin changing facility.
12. Forty-eight per cent of the respondents from the public sector banks and 46.4 per cent of the private sector banks respondents were satisfied with the security system followed by the banks.
13. Thirty-one per cent of the respondents from the public sector banks and 27.2 per cent of the respondents from the private sector bank respondents were satisfied with maintenance work done by the bank on ATMs.
14. Thirty-eight per cent of the respondents from the public sector banks and 28.8 per cent of the private sector banks respondents were satisfied with alternative arrangements made by the bank at the time of power failure/power cut.
15. Twenty-two per cent and 14 per cent of the respondents from private and public sector banks were dissatisfied with the alternative arrangements made by the bank at the time of power failure respectively.
16. Thirty-two per cent of the respondents from the private sector banks and around 30 per cent of the respondents from the public sector banks were satisfied with the door locking facility of ATMs.
17. Thirty-six per cent of the respondents from the private and 33.2 per cent of the respondents from the public sector banks were satisfied with the network connection of ATMs.
18. Thirty-three per cent of the respondents from the public sector banks and 32 per cent of the respondents from the private sector bank ATM users were satisfied with the charges for ATM utilization.
19. Forty-eight per cent of the respondents from the public sector banks and about 44 per cent of the private sector bank respondents were satisfied with the location of ATM centre.
20. Thirty-two per cent of the respondents of the public sector bank and 27.6 per cent of the respondents of the private sector banks were satisfied with the denomination of currency available in the ATMs.
21. Thirty-six per cent of the respondents from the public sector banks and 28.8 per cent of the respondents from the private sector banks were satisfied with the customer service offered by the banks.
22. Thirty-six per cent of the respondents of the public sector bank and 29.2 per cent of the respondents from the private sector banks were satisfied with the availability of ATM centres in their areas.
23. Thirty-six per cent of the respondents from the public sector bank ATM users and 30.4 per cent of the respondents from the private sector bank ATM users were satisfied with the encouragement given by the bank for utilization of ATMs.

Problems faced by the ATM users

1. Seventy per cent of the respondents of the private sector bank ATM users and about 39 per cent of the respondents of the public sector bank ATM users were often faced the problem of out of cash situation in the ATMs.
2. Forty-seven per cent of the respondents of the private sector bank ATM users and about 38 per cent of the respondents of the public sector bank ATM users were often struggling with the problem of ATM machine out of order.
3. Forty-three per cent of the respondents of the private sector bank ATM users and 35.2 per cent of the respondents of the public sector bank ATM users were often faced with the difficulties of card locked inside the ATM.
4. Fifty-two per cent of the respondents of the private sector bank users and 34.8 per cent of the respondents of the public sector bank users were often struggling with the breakdown of a machine function.
5. Forty-three per cent of the respondents from the private sector banks and 30.4 per cent of the respondents of the public sector bank were agreed that often the repairs made shortly to the ATMs.
6. Forty-four per cent of the respondents from the private sector banks and 32.4 per cent of the respondents of the public sector bank ATM users have an unsecured feeling at the time of using ATMs
7. Forty per cent of the respondents of the private sector bank ATM users often avail denomination in the ATMs.
8. Forty-three per cent of the respondents of the private sector bank and 28.4 per cent of the respondents of the public sector bank often facing the fear of fraud on ATMs.
9. It is found that about 34 per cent of the respondents from both the public and private sector banks were often faced with the problem of forgetting the operation from time to time.
10. It is evident that, 42 per cent of the respondents of the private sector bank ATM users and 32 per cent of the respondents of the public sector bank ATM users were often faced the problem of lack of alternatives at the time of power failure.

Recommendation by the Respondents

1. Ninety-eight per cent of the private sector bank respondents and 96.4 per cent of the public sector bank respondents felt that the bank should try to establish some more ATM centres in the suitable locations.
2. Ninety-nine per cent of the private sector bank users and 98 per cent of the public sector bank users have suggested that the bank should try to increase safety measures and security system for preventing frauds on ATMs.
3. Ninety-eight per cent of the private sector bank users and 94.8 per cent of the public sector bank users expected that, the bank should try to simplify the operating system of the ATMs.

4. Ninety-seven per cent of the private sector bank users and 92 per cent of the public sector bank users have opined that the bank should try to recruit employees in the ATM for giving guidance to the old age people, illiterates and rural people at the time of usage.
5. Ninety-six per cent of the private sector bank users and 93.2 per cent of the public sector bank users have suggested that the bank should try to establish an increased number of ATMs in the heart of the city, bus stand, railways station, market places, hospitals and nearer to educational institutions.
6. Ninety-six per cent of the private sector bank users and 86.8 per cent of the public sector bank users have recommended that the bank should try to minimize the formalities for issuing ATM cards to its account holders.
7. Ninety-nine per cent of the private sector bank respondents and 88.8 per cent of the public sector bank respondents expect that the bank should try to increase their customer service through ATMs. There should be proper maintenance of ATM centres.
8. Ninety-six per cent of the private sector bank ATM users and 84.8 per cent of the public bank ATM users have recommended that the bank should try to increase the withdrawal limit on ATMs.
9. Ninety-two per cent of the private sector bank ATM users and 84 per cent of the public sector bank ATM users have suggested that the bank should try to introduce the denomination facility in the ATMs.
10. Ninety-seven per cent of the private sector bank ATM users and 85 per cent of the public sector bank ATM users have recommended that the bank should try to enhance the ATM users, as most of the senior citizens are not using the ATM cards for their use.
11. Ninety-eight per cent of the private sector bank ATM users and 97.3 per cent of the public sector bank ATM users have suggested that, the bank should try to check whether ATMs are having fake rupee notes in the periodical intervals.

Suggestions

In the light of the above findings the following suggestions are offered to develop the ATMs for efficient utilization of every person especially rural, illiterate and old age people. The suggestions based on the study would be pertinent not only the district, but also the state and the nation as a whole.

1. The bank should try to establish the ATM centers, not only near the premises of banks, but also in locations such as shopping centers, malls, railway station, grocery stores, petrol or gas stations, restaurants or anywhere frequented by large numbers of people.
2. ATMs provide a practical demonstration of a number of security systems. The bank should try to protect ATM users from physical attack, and thieves attempting to steal etc.,

3. The bank on their part should device easy to use means of communication on problems that may likely result in the use of ATM and how to resolve them.
4. The bank should try to the strength of the personal identity security and try to use of multiple factors of authentication.
5. In case of network coverage of ATMs the bank should try to give more ATM coverage should be provided for the convenience of the customers.
6. The business persons suggested that the bank should try to increase the withdrawal limits on ATM per day.
7. In case of operating system of the ATMs the bank should bring out new methodologies for operating ATMs to time, the bank should try to instruct the users through bulletins inside the ATMs.
8. The absence of direct interaction with bank staff has increased customer's fear. The bank should improve the facility for interaction with the customers with a view to improve ATM service quality.
9. Banks should develop strategies to motivate non-users through awareness, education, extending personalized service, and demonstrating the functions of ATMs.
10. The banks should make preventive measures for ATMs and commitment to redress the service features of ATMs.
11. The banks should formulate the preventive policy for maintaining the ATMs, it minimizes the malfunctioning of ATMs and out of order, etc.
12. In ATM networks do go out of service, customer could be left without the ability to make transactions until the beginning of the next banking hours. This inconvenience should be minimized through appointing a bank staff for each and every ATM.
13. Operation of an ATM differ from bank to bank, ATM shoves the ATM card in the machine and the customer feels nervous until the machine is giving out cash. The bank tries to change this procedure.
14. Banking customers expect high reliability in their ATMs. This provides motivation to them. The banks should try to minimize machine failure and network failures.
15. The incorrect machine operation creates a high degree of dissatisfaction; sometimes the machine debited the amount from their account without issuing banknotes. It creates stress to the ATM card holder. The bank should try to set right this problem.
16. Power failure is the major problem on ATMs at the time of transacting the ATM, the user struggle through power failure, the card locked inside the ATMs. The bank should try to provide alternative arrangements for power failure on ATMs.

17. More damaging will be the cash out situation which will reflect the inefficiency of the banks, and the customer switching to another ATM at the time of emergency. The bank should try to avoid this situation.
18. New technology and older people seem to be an inappropriate combination. The bank should try to motivate older people to learn new technologies and the bank must take it as a challenge.
19. Security in the ATM is very important, the bank should try to establish multiple security cameras and security guards.

Conclusion

Users are mostly happy with the new technology they experience the devices are making life easier. The banking sector provides a platform to use innovative technologies to enhance operational efficiency and quality of service like getting a statement of accounts, fund transfer, deposits and withdrawal of cash, transfer of funds, payment of bills and premium, recharging of mobile phones, checking and purchasing of financial instruments to also attain and retain customers.

The rapid growth in the use of ATMs in Tiruchirappalli District offers opportunities to banks like reducing the workload of the employees, free from human errors, avoid overcrowding at the branches in the banking operations and extend their services twenty-four hours and seven days a week and three sixty-five days in a year to its customers. The banks should monitor the preferences of customers in advance for satisfying them. The bank should focus on the important aspects of security and privacy as well as the efficient operation of ATMs. Banks should also concentrate an old age people and rural people for utilization of ATMs at the maximum. Take necessary steps to minimize the fear, shyness, theft and the fear of fraud. Finally, the very important need of the hour is an alternative arrangement for power failure for all ATMs and security guard for each and every ATM.

Modern Banking Services: A New Means of Customer Service with Reference to Private and Public Sector Banks

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Abstract

Today, customers have a choice to select the modern banking services, i.e. ATM, Tele Banking, Internet Banking, Mobile Banking, Credit card, Debit card, Electronic Clearing Service (ECS), National Electronic Fund transfer (NEFT), Real Time gross Settlement (RTGS), Cheque Truncation System (CTS), Demat. On the other hand, the advantages of modern banking service are to reduce the transaction cost and lesser crowding, increasing the service through rural people and to satisfy the customers. For the customers, these channels offer convenience, reduced time waste, fast transaction and other issues. Today, banks provide services through various innovative and modern technologies to make the banking work easy and convenient to the end users who are called as 'Modern Banking / Modern Banking Services'. It is very important from the point of view of the banks to have a study about the satisfaction of the customers and their attitude towards modern banking services. This study reveals that the major issues in the modern banking services are security, safety and the lack of trust especially on ATM machines. Fraudulent transactions, robbery, bad and unreliable ATM services (e.g. Stuck-up the ATM card, incorrect Dr or Cr amount in the account etc.) are the reasons which playing a vital role in reducing the trust of customers on modern banking. The results also show that reliability, convenience, speed, safety and security have the major contribution to retain and attract the customers. Finally, the services which are not available in Tiruchirappalli district by private sector banks and public sector banks e.g. Cash depositing facility through ATM machines, "SMS/E-mail Alert" Service, Payment of utility bills through internet etc., are the most desirable services by the customers.

Keywords: ATM machines, Modern Banking Services, Depositing facilities.

Introduction

The Indian banking industry has endorsed radical changes in the corporate world since 1991, after liberalization, Indian financial sector has rapidly moved to technology enabled services throughout the world. These transactions are allowing the banks to enhance customer relationship with self-service and technology enabled services. Banking industries are one of the important service sectors in the Indian economy with modern innovations to push forward the banking service industry to enhance effective customer services. These initiatives are paving the ways to interface the customers with their banks benefitting the

use of modern banking services. Today, customers have a choice to select the modern banking services, i.e. ATM, Tele Banking, Internet Banking, Mobile Banking, Credit card, Debit card, Electronic Clearing Service (ECS), National Electronic Fund transfer (NEFT), Real Time gross Settlement (RTGS), Cheque Truncation System (CTS), Demat. On the other hand, the advantages of modern banking service are to reduce the transaction cost and lesser crowding, increasing the service through rural people and to satisfy the customers. For the customers, these channels offer convenience, reduced time waste, fast transaction and other issues. Today, banks provide services through various innovative and modern technologies to make the banking work easy and convenient to the end users called as 'Modern Banking / Modern Banking Services'. It is very important from the point of view of the banks to have a study about the satisfaction of the customers and their attitude towards modern banking services. Thus, the purpose of the research is to study the views of the customers in using the modern banking services. This study is conducted on selected public and private sector banks in Tiruchirappalli district.

Objectives of the Study

The main objectives are as follows:

1. To know the origin and development of the modern banking services in Tiruchirappalli district.
2. To identify the modern banking services provided by private and public sector banks in Tiruchirappalli district.
3. To compare the problems and prospects of the modern banking services in private and public sector banks.
4. To analyse the customer satisfaction towards the modern banking services in Tiruchirappalli district.
5. To offer suitable suggestions to improve the modern banking services in Tiruchirappalli district.

Scope of the Study

The present study is confined to a precise modern banking services which have been mostly used by the customers' i.e. ATM, Tele Banking, Internet Banking, Mobile Banking, Credit card, Debit card, Electronic Clearing Service (ECS), National Electronic Fund transfer (NEFT), Real Time gross Settlement (RTGS), Cheque Truncation System (CTS), Demat. The research is based on data collected from customers of selected private and public sector banks in Tiruchirappalli district. Other aspects of bank and banking services are not connected with this study. This study examines the satisfaction of customers in private and public sector banks in Tiruchirappalli.

Methodology

The study is an empirical study based on survey method. Both primary and secondary data are used in this study.

Primary data

Primary data were collected through a survey distributed to the customers for the purpose of extracting the required data.

Secondary data

Secondary source of data consists of the existing information collected by the researcher for different sources. The external sources include RBI Reports, Annual Reports on the Banks, magazines, research Journals, websites of the banks and other internet sources. The researcher collected is required secondary sources of data to understand the history of modern banking services, committees related to use of information technology in Indian banking industry.

Selection of the banks

The researcher has selected both public and private sector banks which have a maximum level of branch automation and providing most of the modern banking services in the Tiruchirappalli District. For the selection of banks, the researcher has conducted a primary investigation to investigate the availability of the modern banking services.

Selection of the samples

Selection of the sample is an important part of the research work. The non-probability sampling methods were used for selection of samples and more particularly the purposive sampling (judgmental sampling) method is used. The purposive sampling method (Mishra, 2013) (Vijay *et al.*, 2010) provides a range of alternatives and options in selecting the sample. Hence, purposive sampling technique was adopted to collect details on customers' satisfaction regarding the modern banking services in Tiruchirappalli district. As per the record given by the lead bank, in the private sector banks, there are 30000 customers availing modern banking services and in public sectors there are 85000 customers availing of modern banking services. Of the total banks and customers a sample of three banks each in private and public sector were selected and the customers were selected in these banks for extracting information relating to the study. Some incomplete interview schedules were rejected on reasons of insufficient data.

Tools of analysis

The following tools are used to make the study more effective and meaningful, namely:

- Cross tabulation
- Chi square test
- ANOVA
- T test
- Compound growth rate and
- Factor analysis
- Rating analysis

Period of the study

The study is carried for a period of three years from 2017 to 2018, the secondary data relating to the study were collected for the financial year 2010 to 2017 in which four quarterly months from January to December were taken and presented in the form of a table. Due to the tremendous growth in modern banking services, the need to generalize the present data in banking through the secondary sources was used up to December 2018.

Pilot Study

A pilot survey was conducted prior to the final distribution of the interview schedule with the target group. The purpose of the pilot test was to evaluate the clarity and appropriateness of the questions contained in the interview schedule. The pilot study was conducted in Tiruchirappalli district of the Tamil Nadu (India) as per convenience with 20 customers availing modern banking service in Tiruchirappalli District.

Limitation of the study

Every research work is subjected to certain limitations and this study is also not an exception. The present study has the following limitations:

1. The responses to the study have been solicited from the Tiruchirappalli district only. The expectations of the customers in Tiruchirappalli may vary from those of the rest of India.
2. The customers were selected for the present study to compare modern banking services from the public and private sectors only. As a result, the generalization of the findings of the present research should be considered carefully. Furthermore, the sample was restricted to commercial banks only.
3. The study is restricted to the modern banking services such as Automatic Teller Machine, Debit Card, Credit Card, Tele-banking, Internet Banking, Mobile banking National Electronic Fund Transfer, Real Time Gross Settlement, and Electronic Clearing Service. The other modern services are not considered in this study

Findings of the Study

The findings of the research study in presented here with proper classification:

1. A majority of 73.46 per cent of the customers are in the age group of the 20-40 years in private sector banks. 65.61 per cent of customers are in the age group of 20 to 40 years in public sector banks.
2. A majority of 60.11 per cent of the respondents are male. In public sector banks, the per cent age of male customers is 49.08 whereas in private sector banks, it is 71.15 per cent.
3. A majority of 63.08 per cent married respondents have availed more modern banking services from the banks than the unmarried customers in private

sector banks, whereas public sector banks 70.62 per cent of the respondents avail modern banking services.

4. A majority of 29.62 per cent, 22.28 per cent of the respondents are post graduates and professional respectively in the public sector. In private sector banks, 30.2 per cent, 13.85 per cent of the respondents are post graduate and under graduate customers respectively. The analysis reveals that the post-graduation customers have availed more modern banking services from the banks than the customers of other educational level.
5. A majority of 49.08 per cent of the respondents are Hindus and Christian respectively in both the private and public sector banks in Tiruchirappalli district.
6. A majority of 66.92 per cent the respondents belong to a backward community in private sector banks, In public sector banks, 64.51 per cent availed more modern banking services from the banks than the other community customers.
7. A majority of 31.95 per cent of the respondents are private employees in public sector banks whereas in private sector banks, private employees and government employees constitute 39.23 per cent and 25.38 per cent respectively.
8. A majority of 33.56 per cent of the respondents' monthly income is less than 10,000.36.54 per cent have their monthly income between that Rs.10000 and 25000. In private sector banks. In public sector banks collectively 35.13 and 32.56 per cent ages have their income less than 10000, and Rs.10000-25000 in private sector banks.
9. A majority of 67.81 per cent of the respondents are from nuclear family and the remaining 32.19 per cent of them living in joint family. In the private sector banks 74.62 per cent of the account holders, live in nuclear family and the remaining 25.38 per cent of the respondents live in joint family.
10. In public sector banks a majority of 40.39 per cent of the respondents have knowledge about modern banking through prospectus/ self-analysis/ banking. In case of private sector banks the primary source of knowledge about modern banking services are gained through prospectus/self-analysis/banking and 43.46 per cent of the account holders have this opinion.
11. A majority of 36.15 per cent of the respondents have knowledge about the modern banking services for up to 3 years of private sector banks. As far as the public sector banks are concerned, 41.98 per cent of the respondents have knowledge about the modern services for a period from 1 to 3 years.
12. Number of customers having a credit card: Among the customers of private sector banks 80.16 per cent of the respondents have credit cards and 19.84 per cent do not have a credit card. In public sector banks, 81.40 per cent of the respondents have a credit card and the remaining 18.60 per cent do not have credit card facilities.

13. Time taken for the modern banking services, 57.16 per cent of the customers feel that it is 10-30 minutes in private sector banks, In public sector banks 67.69 per cent of the respondents stated that they take 10–30 minutes. The majority of the respondents feel that the use of modern banking service requires 10 to 30 minutes on an average.
14. Number of accounts In private sector banks 78.08 per cent of the respondents have only one account. In public sector banks 79.78 per cent of them have only one account. Majority of the respondents have only one account.
15. Type of accounts: In case of private sector banks 73.85 per cent of the respondents hold savings account. In public sector banks, 77.97 per cent of the respondents have a savings account. Majority of the respondents have only savings bank account.
16. Number of years the customers having an account: In private sector banks, 47.31 per cent of the respondents have the account in the bank for a period between 1 to 5 years using the modern banking services. Among the customers of public sector banks, 47.37 per cent of the respondents have account for a period between 1 and 5 years.
17. Type of transactions: 78.08 per cent of the respondents use the bank for withdrawal transactions and the next majority of 75.77 per cent of the respondents use the bank for deposit transactions in private sector banks. It is further found that among the customers of public sector banks, 81.03 per cent use bank for withdrawal transactions and the next majority of 74.66 per cent of the respondents use the banks for deposit transactions.
18. Awareness of Modern Banking Services: majority of the respondents in private sector banks 68.85 per cent are partially aware of the modern banking services, 26.54 per cent are fully aware of the modern banking services. In public sector banks, 68.42 per cent are partially aware of the modern banking services, 18.12 per cent are fully aware of the modern banking services.

Findings Based on the Hypotheses

1. Reason for choosing bank based on educational qualification: there is a significant difference in the reason for choosing bank such as safety for deposit, better interest, credit facility, reputation of the bank, fully automated/advanced technology, better money transfer facility, accessibility, close proximity to the residence, quicker and better service, safety locker facility, less service charges and better infrastructure facility with respect to educational qualification of the respondents.
2. Reason for choosing banks based on occupation There is a significant difference in reason for choosing banks, namely safety for deposit, credit facility, reputation of the bank, fully automated/advanced technology, better money transfer facility and accessibility and occupation.
3. There is no significant difference in the reason for choosing bank such as better interest, close proximity to the residence, quicker and better service,

safety locker facility, less service charges and better infrastructure facility with respect to the occupation of the respondents.

4. Reason for choosing bank based on income There is a significant difference in reason for choosing bank such as safety for deposit, better interest, credit facility, reputation of the bank, fully automated/advanced technology, better money transfer facility, accessibility, close proximity to the residence, quicker and better service, safety locker facility, less service charges and better infrastructure facility and income.
5. The awareness level of modern banking based on educational qualification There is a significant difference in the awareness level of customers towards modern banking namely ATM, Tele banking, Internet banking, Mobile banking, Credit card, Debit card, Electronic Clearing Service, National Electronic Fund Transfer, Real Time Gross Settlement, Cheque Truncation System & Demat and the Educational qualification.
6. The awareness level of modern banking based on occupation: There is a significant difference in the awareness level of customers towards modern banking namely ATM, Tele Banking, Internet Banking, Mobile Banking, Credit Card, Debit Card, Electronic Clearing Service, National Electronic Fund Transfer, Real Time Gross Settlement, Cheque Truncation System and Demat and the Occupation.
7. The awareness level of modern banking based on income: there is a significant difference in the awareness level of customers towards modern banking namely ATM, Tele Banking, Internet Banking, Mobile Banking, Credit Card, Debit Card, Electronic Clearing Service, National Electronic Fund Transfer, Real Time Gross Settlement CTS and Demat and Income of the respondents.
8. Parameter for selecting modern banking based on educational qualification: there is a significant difference in parameter for selecting modern banking namely low hidden cost of services, security, technical efficiency, reputation, facilities provided by I-Banking and less risk and the Educational qualification.
9. There is no significant difference in parameter for selecting modern banking such as locational convenience, transfer of funds and net coverage with respect to the educational qualification of the respondents.
10. Parameter for selecting modern banking based on occupation: there is a significant difference in parameter for selecting modern banking namely low hidden cost of services, security, technical efficiency, reputation, facilities provided by I-Banking and less risk with respect to the occupation of the respondents.
11. There is no significant difference in parameter for selecting modern banking such as low hidden cost of services, technical efficiency and reputation with respect to the occupation of the respondents.

12. Parameter for selecting modern banking based on income There is a significant difference in parameter for selecting modern banking such as locational convenience, low hidden cost of services, security, transfer of funds and net coverage service with respect to the income of the respondents
13. There is no significant difference in parameter for selecting modern banking such as technical efficiency, reputation, facilities provided by I-Banking and less risk with respect to the income of the respondents.
14. Problems in the modern banking Based on Educational qualification: There is a significant difference in problems in the modern banking such as insufficient technical knowledge, risky to use, unsuitable location of the ATM, network connectivity problem, time delay, high transaction cost, machine complexity and poor service quality and Educational qualification.
15. Reason for choosing banks based on the type of bank there is a significant difference in reason for selecting bank such as better interest and better money transfer facility among customers of different type of banks in Tiruchirappalli district. Hence, it is concluded that type of bank is a significant role in reason for selecting bank such as better interest and better money transfer facility among customers.
16. There is no significant difference in reason for selecting bank such as safety for deposit, credit facility, reputation of the bank, fully automated/advanced technology, accessibility, close proximity to the residence, quicker and better service, safety locker facility, less service charges and better infrastructure facility among customers of different type of banks in Tiruchirappalli district.
17. Parameter for selecting bank based on the type of bank: There is a significant role in parameter for selecting bank such as security, transfer of fund, net coverage service, technical efficiency, reputation and facilities provided by I-banking among customers.
18. There is no significant difference in parameter for selecting bank such as locational convenience, low hidden cost of services and less risk among the customers of different type of banks in Tiruchirappalli district and the type of bank.
19. Level of satisfaction of modern banking based on the type of bank: There is no significant difference in the level of satisfaction with modern banking namely ATM, Tele Banking, Internet Banking, Mobile Banking, Credit Card, Debit Card, Electronic Clearing Service, National Electronic Fund transfer, cheque truncation system, Demat among customers of different type of banks in Tiruchirappalli district.
20. There is a significant difference in the level of satisfaction with modern banking of RTGS among customers of different type of banks in Tiruchirappalli district.

21. Advantages of modern banking based on the type of bank: There is no significant difference in advantages of modern banking such as convenience, speedy transactions, reduces waiting time, anywhere anytime service and self-service among customers of different type of banks in Tiruchirappalli district.
22. Problems in modern banking services based on type of bank: Type of bank is not playing a significant role in problems in the modern banking services, namely Insufficient Technical Knowledge, Risky to Use, Unsuitable Location Of ATM, Network Connectivity Problem, Time Delay And Machine Complexity among customers.
23. There is a significant difference in problems in the modern banking such as high transaction cost and poor service quality among customers of different type of banks in Tiruchirappalli district.
24. Satisfaction of a grievance settlement system based on the type of bank: There is a significant difference in satisfaction of the grievance settlement system in ATM, Tele Banking, Debit Card, ECS, NEFT and Demat among customers of different type of banks in Tiruchirappalli district.
25. There is no significant difference in satisfaction of the grievance settlement system in Internet banking, mobile banking, credit card, RTGS and CTS among customers of different type of banks in Tiruchirappalli district.
26. There is a significant relationship between the type of bank and age group of customers of banks in Tiruchirappalli district.
27. There is a significant relationship between time taken from transactions and age group of customers of banks in Tiruchirappalli district.
28. There is a significant relationship between availing of modern banking services and age group of customers of banks in Tiruchirappalli district.
29. There is a significant relationship between number of years using modern banking and age group of customers of banks in Tiruchirappalli district.
30. There is a significant relationship between type of credit card and age group of customers of banks in Tiruchirappalli district.
31. There is a significant relationship between number of account and age group of customers of banks in Tiruchirappalli district.
32. There is a significant relationship between the frequency of transaction and age group of customers of banks in Tiruchirappalli district.
33. There is a significant relationship between the type of account and age group of customers of banks in Tiruchirappalli district
34. There is a significant relationship between age and number of years having the account.
35. There is a significant relationship between age and awareness about opening accounts.

36. Reason for Choosing Banks: It is found that the first factor was named as 'Reputation and Better service'. This factor includes the reputation of the bank, close proximity to the residence, fully automated /advance technology, accessibility, less service charges, safety locker facility, credit facility, better money transfer facility, quick and better service, better interest and better infrastructure facility.
37. It is further found that second factor was labelled as 'Low fees and easiest application processes. This factor includes low account fees and easy application process. It is identified third factor was labelled as 'Workplace compulsion'. This factor includes an excellent portfolio of services and workplace compulsion. It is observed that fourth factor was named as 'Recommendation and safety'. This factor includes recommendations from friends and family and safety for deposit.
38. Extent of Aware of Modern Banking services. It is found that the first factor was labelled as 'Internet Banking'. This factor includes RTGS, Demat, NEFT, ECS, CTS, Tele banking, credit card and Internet banking. It is further found that second factor was named as 'Mobile banking'. This factor includes ATM, Debit card and Mobile banking.

Suggestion to the Public Sector Banks

1. The public sector banks must aim at attracting customers from all age groups to open and operate the account.
2. The public sector bank must aim at providing modern banking service to a larger extent invariable of the age, gender, income, marital status and educational qualification, locality (rural and urban), community and the nature of employment.
3. It is suggested to the public sector banks to cover the low income, middle and high-income group for availing modern banking services.
4. The public sector banks must float the modern banking services aspects to all customers through awareness and other means of selling as a very less number of customer knowledge about modern banking customers. Even though, the concept has been floated in India for more than 2 years
5. It is observed that the public sector banks have given credit card to a major position of customers. It is important to the bank to create awareness about the use and other regulation on the use of credit card to customers which may help them to avoid the unwanted use and other problems that may arise due to the use credit card.
6. A maximum of 30 minutes is required to avail the modern banking services of any type. It is suggested that with the help of the available technology the bank must ensure less time and quick service to customers as the main purpose of modern banking services is quick and timely delivery of the financial products and services.

7. With the help of modern banking service concept the public sector banks must make the customers to be aware of online account opening, online payment methods and paying for other utility services through online. This awareness creation may help customers to open two or more accounts like recurring deposit, fixed deposit and other online saving schemes which may help the bank to increase the number of accounts and encourage saving and investment scheme among the customers. This may mutually benefit both banks and the customers.
8. It is suggested to the public sector bank to create awareness about the modern banking services to customers to various methods and means to increase the number of customers to avail the modern banking services and other financial product introduced by the bank.

Suggestion to the Private Sector Banks

1. The private sector banks must aim at attracting customers from all age groups to open and operate the account.
2. The private sector bank must aim at providing modern banking service to a larger extent invariable of the age, gender, income, marital status and educational qualification, locality (rural and urban), community and the nature of employment.
3. It is suggested to the private sector banks to cover the low income, middle and high-income group for availing modern banking services.
4. The private sector banks must float the modern banking services aspects to all customers through awareness and other means of selling as a very less number of customer knowledge about modern banking customers. Even though, the concept has been floated in India for more than 2 years
5. It is observed that the private sector banks have given credit card to a major position of customers. It is important to the bank to create awareness about the use and other regulation on the use of credit card to customers which may help them to avoid the unwanted use and other problems that may arise due to the use credit card.
6. A maximum of 30 minutes is required to avail the modern banking services of any type. It is suggested that with the help of the available technology the bank must ensure less time and quick service to customers as the main purpose of modern banking services is quick and timely delivery of the financial products and services.
7. With the help of modern banking service concept the private sector banks must make the customers to be aware of online account opening, online payment methods and paying for other utility services through online. This awareness creation may help customers to open two or more accounts like recurring deposit, fixed deposit and other online saving schemes which may help the bank to increase the number of accounts and encourage saving and

investment scheme among the customers. This may mutually benefit both banks and the customers.

8. It is suggested to the private sector bank to create awareness about the modern banking services to customers to various methods and means to increase the number of customers to avail the modern banking services and other financial product introduced by the bank.

Suggestions to the Government

1. It is suggested to the private sector banks to cover the low income, middle and high-income group for availing modern banking services.
2. The private sector banks must float the modern banking services aspects to all customers through awareness and other means of selling as a very less number of customer knowledge about modern banking customers. Even though, the concept has been floated in India for more than 2 years

Suggestion to the Stake Holders

It is suggested to the stakeholders to keep in touch with the banks frequently understanding the modern banking service concept and other innovative financial products to enhance the updated knowledge in the use of modern banking services.

Conclusion

Most customers transact with the banking institutions to handle their finances, while some of them have the expertise and time to stand physically on the bank and seek information, some of them do not want to waste time by ensuring their physical presence at the bank premises. This is where the modern banking services come into the picture.

Financial life is not as easy to run as one think from the far shores. This is exactly what is felt by many individuals and companies who make use of the modern-day banking services. A few of them are able to make the best use of the Online banking services while some of them are not. This is the reason why some of them land up losing their hard-earned money due to phishing or spam mails.

The quick services in the banking sector, make obtainable a proposal to use modern technologies to improve operational competence and fineness of services to obtain and grasp the customers. The use of modern banking in banking services provides the probabilities to banks to operate consumers' zeal to assume the services having much planned benefit. In Banking Industry, the Internet Banking is a new era which explores the new horizons of success and development to facilitate and for the betterment of society and open the door of development for the banking industry to enhance business operations. But unluckily the evidences of the research show that mostly services are not available in Tiruchirappalli district, which have been introduced many years before in other districts.

This study reveals that the major issues in the modern banking services are security, safety and the lack of trust especially on ATM machines. Fraudulent transactions, robbery, bad and unreliable ATM services (e.g. Stuck-up the ATM card, incorrect Dr or Cr amount in the account etc.) are the reasons which playing a vital role in reducing the trust of customers on modern banking. The results also show that reliability, convenience, speed, safety and security have the major contribution to retain and attract the customers. Finally, the services which are not available in Tiruchirappalli district by private sector banks and public sector banks e.g. Cash depositing facility through ATM machines, "SMS/E-mail Alert" Service, Payment of utility bills through internet etc., are the most desirable services by the customers.

An Inquiry into the Level of Job Satisfaction among Self-finance College Teachers of Tiruchirappalli City

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Abstract

According to Steve Jurvetson, “Steve Jobs now rests with the sublime satisfaction of symbolic immortality.” In olden days, the 'Guru' or the 'Zachary' had enjoyed covetable status. They had been respected and honored by people belonging to all walks of life, including Kings and Emperors. He was everything for others - a guide, a counsellor and a friend. The teacher was ready to impart to his disciples, whatever knowledge and skills he possessed. As society became more complex, the problems that individuals had to face also multiplied. The relationship between the teacher and the students too began to change. The problems like student disinterest and unrest, wastage, under-achievement, job dissatisfaction, etc. created a gap between teachers and their job., At present, these problems have reached such an enormous stature that the teaching community as well as the student community is in constant turmoil. The modern teachers do not get due-respect and status in society.

Introduction

Since time immemorial, teachers have been placed in high esteem in every society. In olden days, the 'Guru' or the 'Zachary' had enjoyed covetable status. They had been respected and honored by people belonging to all walks of life, including Kings and Emperors. He was everything for others - a guide, a counsellor and a friend. The teacher was ready to impart to his disciples, whatever knowledge and skills he possessed. As society became more complex, the problems that individuals had to face also multiplied. The relationship between the teacher and the students too began to change. The problems like student disinterest and unrest, wastage, under-achievement, job dissatisfaction etc. created a gap between teachers and their job.

At present, these problems have reached such an enormous stature that the teaching community as well as the student community is in constant turmoil. The modern teachers do not get due-respect and status in society. Teachers themselves feel a loss of dignity in their profession. They are discontented because of the changed value pattern in which the wealth and material possessions of a person seem to be respected more than his personal qualities and nobility of profession.

Specific Objectives

1. To identify the levels of satisfaction among the study respondents namely the college teachers
2. To identify those factors which contribute to the existing level of job satisfaction among college teachers
3. To rank those critical factors that determine the existing level of satisfaction.
4. To know the policies and priorities of the management concerning teachers in the study units
5. To delineate the factors that distinguish the government institutions from self-financing institutions in determining the existing levels of satisfaction.
6. To suggest strategies on the basis of the study to fine tune the policies, practices and priorities of the stakeholders in providing optimal satisfaction to the college teachers.

Universe and Sample Size

The Trichy City has 23 Arts and Science Colleges in which 423 teachers are presently employed. The teaching staff on the roll of these institutions forms the universe for the present study.

In consultation with the statisticians, subject and research experts and similar studies, a sample size of 112 respondents is chosen. This sample size constitutes 26.47% of the total teaching population.

Job Satisfaction - A Literally Revised

Hulin and Judge (2003) have noted that job satisfaction includes multidimensional psychological responses to an individual's job, and that these personal responses have cognitive (evaluative), affective (or emotional), and behavioral components. (Hulin and Judge, 2003). Job satisfaction scales vary in the extent to which they assess the affective feelings about the job or the cognitive assessment of the job. Affective job satisfaction is a subjective construct representing an emotional feeling individual have about their job (Thompson and Phua, 2012). Hence, affective job satisfaction for individuals reflects the degree of pleasure or happiness their job in general induces. Cognitive job satisfaction is a more objective and logical evaluation of various facets of a job. Cognitive job satisfaction can be one-dimensional if it comprises evaluation of just one facet of a job, such as pay or maternity leave, or multidimensional if two or more facets of a job are simultaneously evaluated. (Kalleberg, 1977).

Cognitive job satisfaction does not assess the degree of pleasure or happiness that arises from specific job facets, but rather gauges the extent to which those job facets are judged by the job holder to be satisfactory in comparison with objectives they themselves set or with other jobs. While cognitive job satisfaction might help to bring about affective job satisfaction, the two constructs are distinct, not necessarily directly related, and have different antecedents and consequences. (Moorman, 1993).

Job satisfaction can also be seen within the broader context of the range of issues which affect an individual's experience of work, or their quality of working life. Job satisfaction can be understood in terms of its relationships with other key factors, such as general well-being, stress at work, control at work, home-work interface, and working conditions (Aristovnik, 2014).

Table-1: Have a lot of opportunities to be innovative wise classification of the respondents

Particulars	No. of Respondents	Percentage
Strongly Agree	27	24
Agree	25	22
Moderate	26	23
Disagree	21	18
Strongly disagree	14	13
Total	112	100

Source: Field Data

It could be found from Table-1, that 24 percent of the respondents are strongly agree, 22 percent of the respondents are Agree, 23 percent of the respondents are Moderate, 18 percent of the respondents are Disagree, 13 percent of the respondents are Strongly disagreeing. Hence, 24 percent of the respondents are Strongly Agree to have a lot of opportunities to be Innovative.

Table-2: Job gives their sense of dignity and respect classification of the respondents

Particulars	No. of Respondents	Percentage
Strongly Agree	20	18
Agree	35	31
Moderate	23	20
Disagree	20	18
Strongly disagree	14	13
Total	112	100

Source: Field Data

It could be found from Table-2, that 18 percent of the respondents are Strongly agree, 31 percent of the respondents are Agree, 20 percent of the respondents are Moderate, 18 percent of the respondents are Disagree, 13 percent of the respondents are Strongly Disagree. Hence, 31 percent of the respondents are Agree to job gives their sense of dignity and Respect.

Table-3: Most of their job experiences has been pleasantwise classification of the respondents

Particulars	No. of Respondents	Percentage
Strongly Agree	20	18
Agree	27	24
Moderate	20	18
Disagree	22	20
Strongly disagree	23	20
Total	112	100

Source: Field Data

It could be found from Table-3, that 18 percent of the respondents are Strongly agree, 24 percent of the respondents are Agree, 18 percent of the respondents are Moderate, 20 percent of the respondents are Disagree, 20 percent of the respondents are Strongly disagreeing.

Hence 24 percent of the respondents are Agree most of their job experiences has been Pleasant.

Table-4: Job has always been a source of encouragement for teacher-wise classification of the respondents

Particulars	No. of Respondents	Percentage
Strongly Agree	25	22
Agree	28	25
Moderate	22	20
Disagree	17	15
Strongly disagree	20	18
Total	112	100

Source: Field Data

It could be found from Table-4, that 22 percent of the respondents are Strongly agree, 25 percent of the respondents are Agree, 20 percent of the respondents are Moderate, 15 percent of the respondents are Disagree, 18 percent of the respondents are Strongly disagreeing.

Hence, 25 percent of the respondents are Agree to their job has always been a source of encouragement for Teachers.

Table-5: Teachers satisfied about their personal disposition-wise classification of the respondents

Particulars	No. of Respondents	Percentage
Strongly Agree	20	18
Agree	25	22
Moderate	25	22
Disagree	22	20
Strongly disagree	20	18
Total	112	100

Source: Field Data

It could be found from Table-5, that 18 percent of the respondents are Strongly agree, 22 percent of the respondents are Agree, 22 percent of the respondents are Moderate, 20 percent of the respondents are Disagree, 18 percent of the respondents are Strongly disagreeing.

Hence, 22 percent of the respondents are Agree teachers satisfied about their personal Disposition.

Table-6: Feedback from the students is helpful for their career development-wise classification of the respondents

Particulars	No. of Respondents	Percentage
Strongly Agree	20	18
Agree	20	18
Moderate	27	24
Disagree	24	21
Strongly disagree	21	19
Total	112	100

Source: Field Data

It could be found from Table-06, that 18 percent of the respondents are Strongly agree, 18 percent of the respondents are Agree, 19 percent of the respondents are Moderate, 21 percent of the respondents are Disagree, 24 percent of the respondents are Strongly disagreeing.

Hence, 24 percent of the respondents are Moderate to collect feedback from the students is helpful for their career development.

Table-7: Initiative and enthusiasm in discharging their duties-wise classification of the respondents

Particulars	No. of Respondents	Percentage
Strongly Agree	25	22
Agree	28	25
Moderate	22	20
Disagree	17	15
Strongly disagree	20	18
Total	112	100

Source: Field Data

It could be found from Table-7, that 22 percent of the respondents are Strongly agree, 25 percent of the respondents are Agree, 20 percent of the respondents are Moderate, 15 percent of the respondents are Disagree, 18 percent of the respondents are Strongly disagreeing.

Hence, 25 percent of the respondents are Agree to initiative and enthusiasm in discharging their duties.

Table-8: Complete satisfaction with self-motivation-wise classification of the respondents

Particulars	No. of Respondents	Percentage
Strongly Agree	20	18
Agree	30	27
Moderate	21	19
Disagree	25	22
Strongly disagree	16	14
Total	112	100

Source: Field Data

It could be found from Table-08, that 18 percent of the respondents are Strongly agree, 27 percent of the respondents are Agree, 19 percent of the respondents are Moderate, 22 percent of the respondents are Disagree, 14 percent of the respondents are Strongly disagreeing.

Hence, 27 percent of the respondents are Agree complete satisfaction with self-Motivation.

Findings

1. 24 percent of the respondents are Strongly Agree to have a lot of opportunities to be Innovative.
2. 31 percent of the respondents are Agree to job gives their sense of dignity and Respect.

3. 24 percent of the respondents are Agree most of their job experiences has been Pleasant.
4. 25 percent of the respondents are Agree to their job has always been a source of encouragement for Teachers
5. 22 percent of the respondents are Agree teachers satisfied about their personal Disposition.
6. 24 percent of the respondents are Moderate to collect feedback from the students is helpful for their career development
7. 25 percent of the respondents are Agree to initiative and enthusiasm in discharging their duties.
8. 27 percent of the respondents are Agree complete satisfaction with self-motivation.

Suggestions

1. Sex wise distribution of the respondents reveals that more number of women are willing to undertake college teaching profession than ever before and in future there is a likelihood that the women population may become equal or even overtake the men population as far as the college teaching profession is concerned.
2. Age wise distribution of the respondents shows clearly that young people constitute a higher percentage of the respondents which also reflects the general pattern prevailing in the population. For sometimes, there was no significant influx of new talents and fresh energies. But now it is observed that there is an overwhelming response from the young generation to take up the college teaching profession which is a good sign for the cause of education.
3. 'Experience counts' is not a statement without meaning. As they grow in experience, the teachers tend to gain more satisfaction as per the results of this study. The managements must have different schemes for different experience group of teachers.
4. The income-wise distribution shows that most teachers draw a salary of less than Rs. 10,000. Given the cost of living and competitive pay offered by other professions, this salary is simply a pittance for them. The managements must hike their salaries even while ensuring that it continues to have financial viability and freedom.
5. Teachers while ranking the reason for choosing this profession identify, "Interest in Teaching" as the primary reason for taking up this profession. It does augur well for the future of teaching profession. Here, it is the responsibility of the managements to do what are necessary to help them to sustain their interest in the profession.
6. Since most of the teachers felt that their performance is influenced by satisfaction level, the managements must make all necessary steps to

improve their satisfaction level. This is because, the future of the institution and students hinges on the performance of the teachers which is in turn influenced by the extent of their satisfaction must inspire confidence in the minds of staff and develop a sense of belonging among them. Wherever possible the managements must take the teachers into confidence while making decisions affecting them.

7. The overall analysis clearly reveals that the management attitude critically determines the satisfaction level of teachers. "The attituded terminus the altitude", goes the saying. This exactly holds good in case of managements of higher educational institutions. It is imperative for the managements to pre-determine and pre-evaluate all their actions that have a bearing on the satisfaction of their teachers as far as possible. They must avoid actions and responses likely to be viewed as arbitrary, thoughtless and repressive by the staff members. As far as possible each action of the management
8. Besides management attitude, the working conditions are also viewed as a critical variable by the staff members. This may be because the working environment remains closest to the teachers while they discharge their duties. A slightest provocation in the work environment may have a cascading effect on the managements to ensure that the immediate work environment of teachers remains healthy, harmonious and devoid of any stress.
9. Monetary benefits too have emerged as one of the three top most factors influencing the satisfaction level of teachers in all Arts and Science Colleges. The teachers have attached a high level of significance to monetary benefits as one of the decisive factors in shaping their satisfaction. This result confirms the general trend seen among the working population of India, where economic needs are of the fore most importance. Hence, managements must have a
10. Since, the analysis clearly shows that the number of women in teaching profession at college level is constantly growing managements must devise specific programs to enhance the satisfaction of women engaged in this profession. The managements can also give an impetus to diversity celebrations to keep the morale of the women teachers high.

Conclusion

The satisfaction scenario of college teachers is a mixed bag in other words, the satisfaction level of teachers belonging to aided and un aided categories presents a contrasting trend. the teachers working in government and government aided institutions reported a high level of satisfaction with their economic needs being adequately taken care of by the state authorities. In contrast, self-financing teachers have a low level of satisfaction which may be attributed to the absence of monetary benefits are constantly narrowed down and kept at the healthy level. Besides it is interesting to note that the college teachers cutting across the

institutions have got dissatisfaction concerning their management's attitude and approach towards them this is borne out by the fact that the management attitude factor has constantly been poorly rated by the teachers. This should be an eye-opener to the managements and require the managements to reinvent them and fine tune their behaviour.

The emergence of this factor also compels the managements to do a self-introspection and undergo a mental revolution. Each management should ensure that it has put in place a mechanism to diagnose, detect and resolve conflicts and grievances that may arise in course of their administration of teachers and their rights and interests.

The researcher sincerely believes that the finding of this study will bring in a necessary relief to the teachers and other interested parties. The researcher also hopes that the present study forms a basis for all future studies in these related fields. It is appropriate to conclude with the words of Tim Murtaugh.

References

1. Hulin, C. L. and Judge, T. A. (2003). Job attitudes. In: W. C. Borman, D. R. Ligen and R. J. Klimoski (Eds.), *Handbook of Psychology: Industrial and Organizational Psychology*. pp. 255-276.
2. Thompson, E. R. and Phua, F. T. T. (2012). A Brief Index of Affective Job Satisfaction. *Group & Organization Management*. 37 (3): 275-307.
3. Kalleberg, A. L. (1977). Work values and job rewards: Theory of job satisfaction. *American Sociological Review*. 42: 124-143.
4. Moorman, R. H. (1993). The influence of cognitive and affective based job satisfaction measures on the relationship between satisfaction and organizational citizenship behavior. *Human Relations*. 6 (6): 759-776.
5. Tomazevic, N., Seljak, J. and Aristovnik, A. (2014). Factors Influencing Employee Satisfaction in the Police Service: The Case of Slovenia. *Personnel Review*. 43 (2): 209-227.

The Status of Indian Women and Prem Chand

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Abstract

Most striking feature of Prem Chand's literary works is their responsiveness to the conditions and demands of his times. As a social realist, he was deeply aware of the evils prevailing in the Indian society – the religious dogmas, superstitions, exploitation of the peasantry, inhuman treatment of the untouchables, and, above all, the miserable condition of women. These social conditions decided his literary objectives. Prem Chand presented of the Indian society in that part of the 20th century when a new social consciousness against the social and religious evils of society was emerging.

Introduction

The Conservative Indian society and culture assigned an inferior status to women and untouchables to maintain the status quo. The women were subjected to the purdah system, rigid code of chastity, illiteracy and a hard and rigorous life after the death of their husbands. The society took extreme care to keep its women backward and-traditional with a view to containing every process of change this attitude to women meant to keep the society static, and the "inferior status of women in society was further made sacrosanct by religious ordinances."¹

Prem Chand was deeply moved by the deplorable condition of women and their helplessness and sufferings. He criticized society for reducing women to children producing machines and objects of men's lust. With all his might, he pleaded for social rights for women and their protection against exploitation by men.

This captive status of Indian women disturbed the sensitive artist in Prem Chand and he highlighted every form of oppression of the Indian women. His stories depict incompatible marriages, sufferings of widows, evils of the dowry system, and the sufferings inflicted by the British soldiers on women. Before Prem Chand, literature was viewed as a means to create a world of make-believe for aesthetic pleasure. He was one of the early Indian writers to make art an instrument of social change. His concern was with social realities and he wanted to create the ground for social renewal. As regards women, he wanted to make the society aware of the excesses it had been doing to its women for long, so that it could take steps to undo the injustice being done to women.

During Prem Chand's time, the condition of Indian women was very miserable. The birth of a girl in the family was considered unlucky. Between the age of 12 and 14, these girls were married to unknown persons. At times they were married

to men much older than them, provided such men had wealth and prestige. On many occasions, an innocent young woman was forced to marry an aged person who was wealthy, and she had to suffer throughout her life. The prevailing marriage system shows that the status of women in the family was not superior to that of a maid servant. They had no right to property, they were victims of oppression. The widows in particular were branded as a separate class, were considered as creatures of bad women and were not allowed to participate in social life. This humiliation and exploitation compelled some of them to commit suicide or take to prostitution. One striking thing was that this violation of the humanity of women was more prevalent in the upper castes than in the lower castes. The reason for this advantage to the lower caste women was economic. In the lower caste families, women participated in agricultural work along with men, besides doing the domestic chores, and, thus, they were an asset to the family. As compared to the women of the upper castes, they were economically more self-reliant and therefore more independent. As a result of the important role of the lower caste woman in the family's economy, the conservative customs were not as rigid in the lower classes as in the upper classes. There were widow remarriages among the lower caste women and, if they were dissatisfied with their husbands, some of them even deserted to the latter and started living with the persons of their choice. Their society did not stifle them with restriction.

For Prem Chand, emancipation of women meant that they should be allowed opportunities for self-improvement and progress, and should be enabled to think independently. He saw in them potentialities and spirit to fight against their exploitation and oppression. Throughout his literary career, Prem Chand continued to have a deep concern for women. He fought social conservatism to pave the way for the emancipation of women. At the political plane, he emphasised their actual participation in the national struggle and established their politic initiative, so that the society began to think in terms of the equality of sexes.

Prem Chand's women characters belong to both the higher and the lower castes, but his emphasis is on the latter who struggled against their exploitation. Women from all sections of society were victims of exploitation and torture and Prem Chand's main aim was to develop in them consciousness of their condition. To achieve this aim, he presented women who were socially and politically conscious. In fact, his fiction depicts the continuously widening consciousness of women. In his earlier writings, his women characters fight against personal disabilities, subsequently, they stand up to family and social taboos, and ultimately they blossom into patriots and fight for the freedom of the country. In his works, the woman progressively achieves self-emancipation, which raises her status in society, proves her cultural prestige and enables her to participate in public affairs and political life of the country. Such portrayal of women aimed at motivating women to fight against their exploitation, as also to provide inspiration to the other exploited sections of society to do the same.

In Prem Chand, women feel concerned with the country's problems and protest against the widespread superstitions in the village, but they are also mindful of the country's freedom. Jalpa in *Godan*, Sukdhin karambhumu Sheelwati in 'Ahuthi' foresee their emancipation in terms of the country's freedom. Prem Chand had a high opinion about the Indian women and his "ideal women" are the embodiments of sacrifice, selfless service and purity. Jalpa is one such woman. About such women, Prem Chand says: "My ideal women represent at one-point sacrifice, selfless service and purity."² His good women face the hard realities of life which induce in her self-confidence. It is this self-confidence born of her struggle that motivates play an active role in the freedom struggle and loves her country. "Besides, she has moral courage, so much so that she would not give a false evidence to save her husband and send an innocent person to the gallows."² Prem Chand not only presents the plight of women with sensitivity but he also underlines that the Indian women possesses qualities which would help solve her problems. A look at his women characters would show that he was one of the finest feminists and used his literary skill to bring about the emancipation of women.

The above-mentioned opinion of Prem Chand about women is reflected in almost each of his major work. In *Karambhumi*, Saloni, a poor labourer and peasant has enough social consciousness to enable her to fight for her rights. Subsequently, she links herself to the struggle for the country's freedom. In "Sukda", the woman is presented as a source of initiative and inspiration. She participates in the political struggle to end the foreign rule, and she is brave, dedicated and straightforward. According to Prem Chand, "suppressed manhood is virginity,"³ and he assigns a leading role to the women of his times in the Indian national freedom struggle, so that she could inspire the men. This is perhaps why Sukda is shown vigorously protesting against the tortures, immorality and corruption of the police, and the police conceding victory to the masses. Prem Chand had a deep sympathy for the exploited. Sukda listens to the demands of people rather than resorting to political expediency. Thus, the women in Prem Chand represent humane values and make him a writer of lasting significance.

As a social realist, Prem Chand successfully presents the various problems of the Indian women of his times. As a social reformer, he suggests several ways to emancipate them. His works depict the condition and attitudes of women sympathetically. The various aspects of the problems confronting the women projected in his fiction can be divided into the following categories:

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1. Women and their love for ornaments;
2. Love relations before marriage;
3. Dowry system and women;
4. Incompatible marriages; the problems of widows;
5. Prostitution and women; and
6. Women and the national movement

Conclusion

To conclude, Prem Chand's ideas on the status of women suggest that he had a deep understanding of the problems of women and was confident that the Indian women had the capacity to put an end to their humiliation, oppression and exploitation. For him, those who were oppressed and suppressed had a tremendous capacity to protest against these humiliations with vigour and strength.

To conclude the discussion on the status and life of women and their problems in Prem Chand's literary works, the author presents his women fighting against their social domination which caused many a problem of women, as well as trying hard to become economically self-reliant. The writer believes that cooperation between man and woman is essential for the growth of society. According to him, "without the woman's cooperation man cannot do anything alone." No work will be completed until women involve in that work.

References

1. A. R. Desai, *Social Background of Indian Nationalism* (Bombay: Popular Prakashan Ltd., 1981), p. 274.
2. Prem Chand, *Gaban* (Allahabad; Hans Publication, 1978), p. 137.
3. Prem Chand, *Karambhumi* (Allahabad; Hans Publication, 1978), pp. 221-222.

உயர்கல்வி நிறுவனங்களில் தரம் மையப்படுத்திய அறைகூவல்கள் மற்றும் எதிர்கால வளர்ச்சி நிலை

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மற்றும் முனைவர் ம. பிரேமா
தமிழாய்வுத்துறை
புனித சிலுவை கல்லூரி, திருச்சிராப்பள்ளி

முகவுரை

கல்வி என்பது சமூக மாற்றத்தின் மூலம் நாட்டின் ஒட்டுமொத்த வளர்ச்சியை முன் நடத்திச் செல்லும் ஒரு காரணியாகத் திகழ்கிறது. ஆளுமை, மதிப்பீடு மற்றும் தனித்திறன் ஆகியவை எல்லாக் காலத்திலும் கல்வியின் பின் புலமாக உருவெடுத்து மனித சமுதாயத்தை உருவாக்குகிறது. இருபதாம் நூற்றாண்டில் உயர்கல்வி சமூக கலாச்சார மாற்றத்திற்குரியதாக எண்ணி நாடு விடுதலை அடைந்தது முதல் பெருமளவு அரசு முதலீடு செய்து மாணவர் சேர்க்கையை அதிகரித்து இருக்கிறது. இம் முயற்சியினால் ஏற்பட்ட மாற்றங்களை குருகுலக் கல்வி முறைமையினை இன்று நாம் பின்பற்றும் புதியக்கல்வி முறையால் புரிந்து கொள்ள முடிகிறது.

கல்வி சமூக நிலையை மூன்று கூறுகளாகப் படம்பிடித்துக் காட்டுகிறது. அவையாவன:

1. கல்விச் சுதந்திரம்
2. அறிவுசார் சமூகம்
3. உலகமயமாக்கல் மூலம் ஏற்பட்ட கல்வி மாற்றங்கள்

இந்திய அளவில் சமத்துவத்தை மையப்படுத்தி அனைவருக்கும் கல்வி என்ற கொள்கையோடு கல்வியாளர்கள் தங்களின் முடிவுகளை திறம்பட செய்து மேம்படுத்த முயல்கின்றனர். உலக அரங்கில் இன்றையக் காலக் கட்டத்திற்கு தேவைப்படும் கல்வியின் நிலை அறிந்து பல மாற்றங்களை ஆட்சியாளர்கள் தங்கள் கல்விக் கொள்கையின் மூலம் அறிமுகப் படுத்துகின்றனர்.

அனைவருக்கும் உயர்கல்வி

பண்டையக் காலம் தொட்டு குருகுலக் கல்வி முறையினை இந்தியத் திருநாடு பின்பற்றியதன் காரணமாக ஒருங்கிணைந்த கல்வி வளர்ச்சியை மையப்படுத்தவில்லை. ஆங்கிலேயர் ஆட்சிக் காலத்தில் 19ஆம் நூற்றாண்டில் கல்வி முறைமை முறைப்படுத்தப்பட்டு நாடு சுதந்திரம் அடைந்த வேளையில் 21ஆம் நூற்றாண்டில் பல்கலைக்கழகங்களும் 500க்கும் மேற்பட்ட கல்லூரிகளும் செயல்பட்டு மாணவர்களுக்கு உயர்கல்வி வழங்கி வருகின்றது. அதிகமான மாணவர்கள் தங்களை உயர்கல்வியில் இணைத்துக் கொண்டு படிப்பறிவு பெற்ற நிலையில் அரசுக்கு நிதிச்சுமை ஏற்பட்டது எனினும் மனிதவள மேம்பாடு என்ற கருத்தை மனதிற் கொண்டு ஆட்சியாளர்களும் செயல்பட்டனர்.

ஒருபுறம் பல்கலைக்கழகங்களும், கல்லூரிகளும் எண்ணிக்கையில் வளர்ந்தாலும் மற்றொரு புறம் கல்வியின் நிலை போதிய வசதி வேலைவாய்ப்பு இல்லாததால் தரம் குறைந்த நிலையில் உள்ளது. உலக அரங்கில் பல நாடுகள் உயர் கல்விக்கான செலவினங்களை பெற்றோர்கள் சுமக்கும் நிலையை உருவாக்கியுள்ளன. இது ஆஸ்திரேலியா மற்றும் இங்கிலாந்து போன்ற நாடுகளில் சட்டமாகவே உருவெடுத்துள்ளது.

இந்தியாவிலும் தனியார்மயமாக்கல் கொள்கையின் காரணமாக சமூகத்தில் மிகுதியானவர்களுக்கு கல்வி எட்டாக் கனியாகவே இருக்கிறது. எனவே அரசு கல்வி உதவித்தொகை பெற மாணவர்களுக்கு நேரடியாகவோ, வங்கியின் மூலமாகவோ வழங்கி கல்வி நிலையை மேம்படுத்தி வருகிறது. மத்தியப் பல்கலைக்கழகங்களில் குறைந்த அளவிலான கல்விக் கட்டணம் பெற்ற போதிலும் ஏனைய பிற மாநில மற்றும் தனியார் பல்கலைக்கழகங்களும் சுயநிதிக் கல்லூரிகளும் கல்வி கட்டணத்தை மாணவர்களை மையப்படுத்தி செயல்படுத்தவில்லை.

மத்திய அரசு ஒவ்வொரு ஆண்டும் ஒரு குறிப்பிட்ட சதவிகிதமான நிதி உதவியை உயர்கல்வி நிறுவனங்களுக்கு வழங்கி உதவி செய்ய நினைத்தாலும் அதிகப்படியான செலவினங்களை தொடக்கக் கல்விக்கு வழங்க வேண்டிய நிலை ஏற்படுவதால் உயர் கல்விக்கான நிதி ஒதுக்கீடு குறைவாகவே இருக்கிறது.

மாணவர்கள் மேற்கொள்ளும் பட்டப்படிப்பு தரமான நிலையில் இல்லாததால் மாணவர்களுக்கு வேலை வாய்ப்புத் திறன் தொழிற்சாலையின் எதிர்பார்ப்பிற்குத் தக்கவாறு இல்லை. எனவே தனித்திறனை மையப்படுத்தியக் கல்வி தேவைப்படுகிறது.

கல்வி நிறுவன வளர்ச்சி ஏன்? ஏதற்கு?

கல்வி நிறுவனங்கள் புதிய முறையில் பல பாடத்திட்டங்களை உருவாக்கி மாணவர்களை மேம்படுத்த முயற்சித்த போதிலும் கற்பதற்கான ஆய்வுக் கூடங்களை முறையாக உருவாக்கப்பட்டவில்லை. இதைக்கடந்து உயர்கல்வி நிறுவனங்களில் போதிய கட்டடம், போதிய வசதி வாய்ப்பு, நிரந்தர ஆசிரியர் பணி நியமனம், ஆசிரியர் தரம், கற்பிக்கும் முறை, ஆய்வின் நிலையில் தரம், கல்வியில் பற்றில்லா மாணவர்நிலை, அதிகப்படியான மாணவர் எண்ணிக்கை, குடும்ப வருமானம் ஆகியவை இன்றும் கல்விகற்கும் மாணவர்களுக்கும் கல்விக்கூடங்களுக்கும் சவாலாகவே இருந்து வருகிறது.

தொழில் வளர்ச்சி, அறிவியல் மாற்றம் ஏற்பட்டு இருக்கும் இன்றையக் காலக் கட்டத்தில் ஆசிரியர் திறன் மேம்பாடு மற்றும் திறமையான கற்பித்தல் முறை என்பது முக்கியத்துவம் வாய்ந்ததாகக் கருதப்படுகிறது. உலக நாடுகளுக்கு இடையே போட்டி மனப்பான்மையை உருவாக்கி தரமான மாணாக்கர்களை நாட்டின் சேவைக்காக உருவாக்கி தொழில் மற்றும் பொருளாதார நிலையை மேம்படுத்தும் போக்குக் காணப்படுகின்றது.

உலக அளவில் இன்று 300க்கும் மேற்பட்ட பல்கலைக் கழகங்கள் மூலமாகவும் 15,600 கல்லூரிகள் மூலமாகவும் 2.5 கோடி மாணவர்கள் ஒவ்வொரு ஆண்டும் அமெரிக்கா மற்றும் சீனா நாடுகளுக்கு அடுத்தப்படியாக உருவாக்கப்படுகின்றனர். இதில் பொறியாளர்கள் எண்ணிக்கை 3.5 இலட்சம், கல்வி நிலை உயர்ந்து மாணவர் தரம் உயர்ந்தால் நாட்டின் பொருளாதாரத் தொழில் வளர்ச்சி மேம்படும்.

தேசிய அறிவு குழுமத்தின் பரிந்துரைகள் (2006)

1. இந்திய அரசாங்கம், மொத்த பதிவு விகிதத்தை (Gross Enrolment) 15 சதவீதம் உயர்த்தும் நோக்கில் தேசிய அளவில் 1,500 பல்கலைக்கழகங்களை உருவாக்க வேண்டும்.
2. ஐம்பது தேசிய பல்கலைக்கழகங்கள் உயர்தர கல்வியை வழங்கும் நோக்கில் உருவாக்கப்பட வேண்டும்.
3. இத்தகைய பல்கலைக்கழகங்கள் மாணவர்களுக்கு மனித நேயம், சமூக அறிவியல், அடிப்படை அறிவியல், வணிகம் மற்றும் தொழில் துறைப் பாடங்கள், இளங்கலை மற்றும் முதுகலை அளவில் பயிற்சியளிக்கப்பட வேண்டும்
4. உயர்கல்வி பாடத்திட்டத்திற்கு உட்பட்ட பல்கலைக்கழகங்கள் மற்றும் உயர்கல்வி நிறுவனங்கள் தேசிய மற்றும் உலக அளவில் சிறந்தவையாக விளங்க வேண்டும்.

இந்தியாவின் இருபதாம் நூற்றாண்டு பல்கலைக்கழகங்களின் செயல்பாடுகளை விட வித்தியாசமான மற்றும் சிறந்த செயல்பாடுகளை இன்றையத் தலைமுறைக்கான பல்கலைக்கழக தலைவர்களும் உயர்கல்வி நிறுவனங்களும் செய்வார்கள் என எதிர்பார்ப்புக்கப்படுகிறது. பல்கலைக்கழக மானியங்களின் ஆணைக்குழு பல உயர்நிலை கல்வி நிறுவனங்களின் நிலையை பல்கலைக்கழகங்களாக உயர்த்துகிறது. மற்றும் கல்லூரிகள் தங்களின் தனிப்பட்ட சிந்தனைகளால் உயர் நிலை கல்வியை திறமை மிகுந்ததாக மாற்ற அனுமதிக்கிறது.

பல்கலைக்கழகங்கள் மற்றும் நிகர்நிலை பல்கலைக்கழகங்கள் பயிற்சி வகுப்புகள் பாரம்பரிய கற்கும் நிலைகள் கற்கும் முறையில் எளிமை கூட்டாண்மை ஆகியவற்றை வளர்க்கிறது. யுககடையைவடைபெ, பல்கலைக்கழகங்கள், ஆகியவற்றை தன்னாட்சி

கல்வி கொள்கைகளை உருவாக்கி புதிய பாடத்திட்டங்களையும், புதிய பல கற்கும்முறைகளையும், மாணவ சேர்க்கையையும் அதிகப்படுத்தி செயல்படுகின்றன. இவை அனைத்தும் உயர்கல்வி நிறுவனங்களையும் அதன் செயல்பாடுகளையும் சிறப்பற ஆய்வு செய்து மேம்படுத்த வழிவகை செய்கின்றன.

மாணாக்கர்களின் வேலை வாய்ப்பு

கல்வி முறைமை என்பது வேலை வாய்ப்பை உறுதி செய்யும் ஒன்றாக இருக்க வேண்டும் இந்திய கல்வி நிலையில் குறிப்பாக உயர்கல்வி திறன் மேம்பாட்டை மையப்படுத்தியும் திறன்களை கண்டறிந்து வேலை வாய்ப்பினை உறுதிசெய்யும் முறையையும், மொழித்திறன், கற்றலின் ஆர்வம், கணினி பயன் பாட்டுத்திறன் ஆகியன இன்றைய காலகட்டத்திற்கு மிகவும் அவசியமான ஒன்றாக கருதப்படுகிறது.

கூகுல் நிறுவனத்தைச் சார்ந்த ராம்ஸ்ரீராம் என்பவர் இந்தியாவில் சரியான திறன் கொண்டவர்களை கண்டுபிடிப்பது மற்ற நாடுகளை விட மிகக்கடினமான ஒன்று என்று கூறியுள்ளார்.

இன்றைய இளைஞர்களுக்கு வேலை வாய்ப்பினை நல்கும் நிறுவனங்கள் அவர்களிடமிருந்து வலைத்தளம் உருவாக்கம் மற்றும் பயன்பாட்டுத்திறனை எதிர்நோக்கி இருக்கின்றன. கல்லூரி மாணவர்களைத் தேர்ந்து வேலை வாய்ப்பை உறுதி செய்தாலும் அவர்களை நிறுவனத்திற்கு ஏற்றவாறு உருவாக்க பெரும் தொகை செலவு செய்வது என்பது நிறுவனங்களின் நிதிச்சமையாகக் கருதப்படுகிறது. உயர் கல்வியிலும், திறன் மேம்பாட்டிலும் அரசு போதிய கவனம் செலுத்தி மனித வளங்களை உருவாக்கி இருந்தாலும் இவர்களில் பெரும்பாலானோர் வேலைக்கேற்ற நிலையில் உருவாக்கப்படவில்லை.

திறனாய்வை மேற்கொள்ளும் வெளி நிறுவனங்கள்

மிகுதியான உயர்கல்வி நிறுவனங்கள் உருவாக்கப்பட்டு இருந்தாலும் இந்தியாவில் கல்வி நிறுவனங்களின் தரம் என்பது ஒரு கேள்விக் குறியாகவே இருந்து வருகிறது. எனினும் இந்தியாவில் IIT, IIM (இந்திய தொழில்நுட்ப நிறுவனம், இந்திய மேலாண்மை நிறுவனம்) போன்றவை தங்கள் செயல்பாடுகளில் எந்தவிதத்திலும் தங்களது நிறுவனங்களின் தரத்தினை குறைத்து மதிப்பிடப்படுவதில்லை. இந்த கல்வி நிலையங்களை ஆய்வுச் செய்ய பல புதிய நிறுவனங்களை உருவாக்கி ஒவ்வொரு ஆண்டும் மதிப்பீடு செய்வதன் மூலம் பல உயர்கல்வி நிறுவனங்கள் திறன் மேம்பாட்டிலும் வேலை வாய்ப்பிலும் மிகுந்த கவனம் செலுத்தி வருகின்றனர்.

அறைகூவல்களும் எதிர்பார்ப்புகளும்

1. இந்திய மாணவர்கள் திறமையிலும் வேலை வாய்ப்பிலும் மற்ற நாடுகளிலிருந்து உருவாக்கப்படும் மாணவர்களின் நிலைக்கு ஏற்றப்படி இல்லை.
2. இந்திய உயர்கல்வி நிறுவனங்களால் உருவாக்கப்படும் மாணவர்களில் 15% மட்டுமே வேலைவாய்ப்பு பெற ஏற்றநிலையில் உள்ளனர். ஏனையோர் வேலைக்கேற்றத் திறமையும் நல்லெண்ணமும் இல்லாமல் இருப்பது மிகுந்த வேதனைக்குரியதாகக் கருதப்படுகிறது.
3. வேலை வாய்ப்பை உறுதிசெய்யக்கூடிய முறையான கல்வி திட்டத்தினை உருவாக்கி ஆசிரியர்கள் செயல் பட வேண்டும். கற்பித்தலில் ஆசிரியரும் கற்றலில் மாணவரும் ஆர்வம் உள்ளவராய் இருந்து தரமான கல்வி நிலையை உருவாக்க வேண்டும். இதற்கு பெற்றோரும், அரசும், ஏனைய சார்பு நிறுவனங்களும் உதவி செய்ய முன்வர வேண்டும்.
4. ஒவ்வொரு ஆண்டும் கல்வி நிலையங்கள் கல்வி பயன் பாட்டாளர் மத்தியில் ஆய்வுமேற்கொண்டு பிரச்சனைகளை கண்டறிந்து உடனடி நடவடிக்கை தீர்வுகாண வேண்டும்.

முடிவுரை

தரம் மற்றும் திறன் மேம்பாடு என்பது அனைத்து கல்வி நிறுவனங்களிலும் மிகுந்த முக்கியத்துவம் கொண்டதாக கருதி கல்வி நிலையங்கள் உண்மையோடு செயல்பட

வேண்டும். தர மதிப்பீட்டு நிறுவனங்கள் வருகையின் அச்சத்தில் செயல்படுதல் கூடாது. தரம் என்பது தேவையான ஒன்று என்றும் சமூக மாற்றத்திற்கும் தனி மனித வளர்ச்சிக்கும் மிகவும் அவசியம் என்பதை உணர்ந்து கல்வி நிறுவனங்கள் செயல்படுதல் வேண்டும்.

கல்வி நிலையை மேம்படுத்தும் முயற்சியில் அதன் பயன்பாட்டாளர்கள் அனைவரும் ஒன்றிணைந்து கல்வி வளர்ச்சி தேச வளர்ச்சி என்பதை உணர்ந்து செயல்பட வேண்டும் புதிய இந்தியாவை படைக்க முன்வர வேண்டும்.

References

1. அலெக்ஸ்டிச், எல். ஆர். (1997). Students' Educational Orientation and Preferences for Advising from University Professors. *Journal of College Student Development*, 38: 333-343.
2. பார்நத், ஆர். (1988). Entry and Exit Performance Indicators for Higher Education: Some Policy and Research Issues. *Assessment and Evaluation in Higher Education*, 13: 16-30.
3. ஹெர்னன், பி. (2002). Quality: New Directions in the Research. *Journal of Academic Librarianship*, Vol. 28, Issue 4.
4. ஜெயராம், என். (2006). National Perspectives: India. In: Forest, James J. F. and Altbach, Philip G. (eds.). *International Handbook of Higher Education*. Springer. Dodrecht, The Netherlands.

புகலிடச் சிறுகதைகளின் பனுவல்வாசிப்பு

முனைவர் ஞா. பெஸ்கி

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புலமுதன்மையர் - மொழிகள் மற்றும் பண்பாட்டுப்பள்ளி
தூய வளனார் தன்னாட்சிக் கல்லூரி, திருச்சிராப்பள்ளி

முன்னுரை

எழுபதுகளின் இறுதியில் உருவாகத் தொடங்கிய வாசகர்மையத் திறனாய்வு படைப்பாளியின் மேலாண்மையைப் புறக்கணித்துப் புரட்சி படைத்தது. பனுவலின் வாசிப்பில் வாசகனைத் தனது பங்காளியாக்கிக் கொள்கிறது. சில நேரங்களில் வாசகனை படைப்பாளருக்குப் பதிலாக ஆற்றல் மிக்கதோர் ஆளுமையாக முன்வைக்கிறது. அதாவது முழுமையான நிரந்தரமான ஆளுமையாக, தெளிவான பொருண்மையின் பிறப்பிடமாக வாசகனை நிலைநாட்டுகிறது. படைப்பிலக்கியத்தில் இத்தகைய பனுவலின் வீச்சுகளை அடையாளம் காணவும், பனுவலுக்கும் வாசகருக்கும் இடையேயான உறவுநிலையைக் கண்டறியவும் தேவையான வாய்ப்பை இது உருவாக்கிக் கொடுத்துள்ளது. புகலிடச் சிறுகதைகளில் வாசகரை மையமிட்டதாக அமைந்துள்ள பனுவலின் உறவுநிலையையும் பனுவலின் ஊடாகச் செல்வாக்கு பெற்றுள்ள கருத்துநிலைகளையும் அமைப்பியலின் வெளிச்சத்தில் ஆராய்வதாக இக்கட்டுரை அமைகிறது.

வாசகர் மையத்திறனாய்வின் போக்குகள்

கடந்த சில ஆண்டுகளில் வாசகமையத்திறனாய்வுக்கோட்பாடு காண்பதில் பல நாடுகளை, மொழிகளைச் சார்ந்த எழுத்தாளர்கள் பங்கேற்றுள்ளனர். நிகழ்வியல் மற்றும் உரைவிளக்கவியல் சிந்தனை கொண்ட ஜோர்மானியர்கள் சிறப்பாகப் பணியாற்றினர். ஆங்கிலோ சாக்ஸன் திறனாய்வும் வாசகமையத்திறனாய்வுப் போக்குகளை வலுப்படுத்துவதில் துணைபுரிந்துள்ளது. ஸுஸன் சலோமான், 'The Reader in the Text – Essays on Audience and Interpretation' என்னும் நூலின் முன்னுரையில் உருவம் மற்றும் இயல்பின் பார்வையில் வாசகனை மையமாகக் கொண்ட திறனாய்வுப்போக்குகளை எடுத்துக்காட்டியுள்ளார்.

ஓர் இலக்கியப் பிரதியினை வாசித்தல் என்பது உணவு ஒழுங்குமுறையை போலச் சிக்கலான மரபுகளைக் கொண்டது. ஆனால் முறையியல் ஏறத்தாழ ஒன்றுதான். நிகழ்ச்சிகள், கதைமாந்தர், குறியீடுகள் போன்றவற்றின் அனுபவப் பொருண்மையைத் தூக்கி முதலில் அடைப்புக்குள் போடவேண்டும் - அதாவது விலக்கிவிடவேண்டும். ஆயின் இந்தத் தனிக்கூறுகள் யாவும் எப்படி நிர்ணயிக்கப்பட்ட செயல்கள் - சேகரங்கள் - முரண்கள் - சமன்பாடுகள் வடிவில் அமைந்துள்ளன. இவற்றின் எல்லைக்குள் வர அனுமதிக்கும் உள்தர்க்கம் என்ன என்பதை வெளிப்படுத்துவதாகவே ஓர் அமைப்பு மைய ஆய்வு அமையும். (ஐ.க.பூரணச்சந்திரன், 1991, ப. 40)

வாசிப்புச் செயல்பாட்டைக் குறியியல் செயல்பாட்டின் பின்னணியில் க. பூரணச்சந்திரன், கண்டுணர் வாசிப்பு, பின்னிலை வாசிப்பு என்று இருவகையாகப் பாகுபாடு செய்துள்ளார். கண்டுணர்வாசிப்பு என்பதை, “முதல்முறை வாசிக்கும்போதே குறியீடு (decoding) நிகழ்கிறது. இது தொடரியல் விளக்கத்தினைத் தந்துகொண்டே வருகிறது” ஐ.க.பூரணச்சந்திரன் (2004, பக். 134-135) என்றும் பின்னிலைவாசிப்பு என்பதை, “பிரதியினூடாக முன்னேறும்போதே வாசகர் இப்போது முன்னர்தான் குறியீடு செய்து வாசித்தவற்றை மாற்றிக் கொண்டே வருகிறார் (மேலது, ப.136) என்றும் விளக்குகிறார்.

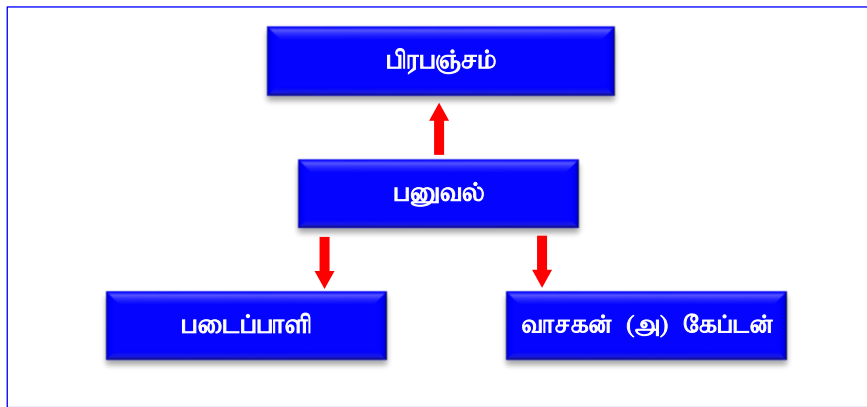
பனுவல் - விளக்கம்

நாட்டுப்புறவியலின் தொடக்கக்காலத்தில் பனுவல் என்னும் கருத்தாக்கம் வாய்மொழிவழக்காறுகளின் எழுத்துவடிவம் என்று மட்டுமே கருதப்பெற்றது. “ஒரு கதை எடுத்துரைக்கப்படும்போது அது ஒரு நிகழ்த்துதலாக அமைகிறது. அவ்வாறு எடுத்துரைக்கப்பெற்ற கதையை எழுத்துப்பெயர்வு செய்யும்போது எழுதப்பட்ட வடிவம் அக்கதைகூறும் நிகழ்த்துதலின் பனுவல் எனப்படுகிறது” (ஆறு. இராமநாதன் (பதி.) (2003), ப. 109). “ஒரு குறிப்பிட்ட சமிக்ஞைகளின் தொகுப்பு ஏதாவது ஒரு ஊடகத்தின் மூலமாக அனுப்பப்பட்டு ஒரு குறிப்பிட்ட சமிக்ஞைவிதிகளின் தொகுப்பு அல்லது ஒரு குறிப்பிட்ட சமிக்ஞை விதியினால் பெறப்படுமானால் அத்தொகுப்பு பனுவல் எனப்படும்.” (எம். டி. முத்துக்குமாரசாமி (1988), ப.15).

பெறுபவன் பொருண்மையைப் புரிந்து கொள்வது வெளிப்பாட்டுநிலை எனப்படும். சொன்மையும் பொருண்மையும் தமக்குள் ஒன்றோடொன்று பொருந்தாமல் ஒன்றை ஒன்று தூரத்தில் நின்று உறவு கொள்ளும் செயல்பாடு பற்றியும் ரோலான்பார்த் கூறியுள்ளார். அப்படித் தூரத்தில் நின்று அவ்விரண்டும் ஏற்படுத்தும் உறவின்பெயர்தான் பனுவல் எனப்படுகிறது. பனுவல் என்னும் சொல்லால் முன்பு பிரதி என்னும் பெயரிட்டு அழைக்கப்பெற்றது. எனினும் தவறாகச் சிலரால் இச்சொல் புத்தகம் என்ற பொருளில் பயன்படுத்தப்பட்டாலும் பனுவல், புத்தகத்திலிருந்து வேறுபட்டது.

புத்தகம் தாள்களினுள்ளே கறுப்பு மையால் இடப்பட்டுள்ள மொத்த அடையாளங்களைக் குறிக்கிறது. பிரதி என்று ரோலன்பார்த்தால் அறிமுகப் படுத்தப்பட்டுள்ள ஒன்று கறுப்பு மைக்கும் பின்னால் உள்ளதாகும். கறுப்புமையால் அடையாளம் இடப்பட்ட புத்தகம் ஓரிடத்தில் தொடங்கி வேறு ஓரத்தில் முடிகிறது. பிரதி தொடர்ந்த உற்பத்தியில் இருக்கும். ஒரு வாசகனையும் ஓர் ஆசிரியனையும் இரகசியமான ஓர் ஒப்பந்தத்தில் வைப்பதின் பெயர் பிரதி. பிரதி குறிப்பானாகவும் (சொன்மை) புத்தகம் குறிப்பீடாகவும் (பொருண்மை) விளங்கும். அதாவது புத்தகமின்றிப் பிரதி இல்லை. (தமிழவன், (1992), ப. 85.) பிரதிக்கு ஆசிரியன் இல்லை. புத்தகத்துக்கு ஆசிரியன் உண்டு.

பார்த் பனுவலைப் பல வாசல்களைக் கொண்டதாகவும் பல மொழிகளின் உறைவிடமாகவும் பல வலைப்பின்னல்களைத் தொடங்குமிடமாகவும் கருதுகிறார். எனினும் அதனை வாசிக்கத் தொடங்கியவுடன் அதன் வாசல்கள் திறக்கத் தொடங்குகின்றன. அதன் பல்வேறு மொழிகள் பல்வேறு பொருண்மைகளைத் தரத் தொடங்குகின்றன. அதன் வலைப்பின்னல்கள் பனுவலுக்குள் உள்ள பல்வேறு உறவுகளைச் சுட்டத் தொடங்குகின்றன. எம். எச். அம்பராஸ் பின்வருமாறு பனுவலை விளக்குகிறார்:



இந்த வரைபடத்தின் மையத்தில் பனுவல் உள்ளது. அதிலிருந்து சமமான இடைவெளியில் பொருண்மை உற்பத்தியில் பங்காளிகளாக உள்ள பிரபஞ்சம், படைப்பாளி, கேட்பவர் (வாசகர்) இருக்கின்றனர். படைப்பாளி வெளிப்படுத்துகிறான். பிரபஞ்சம் என்னும் நிலையில் தான் வெளிப்பாடு நிகழ்கிறது. வாசகர் பொருண்மையை உட்கொள்கிறான். ஆசிரியனின் படைப்பாக இருந்த இலக்கியம் பனுவல் என்றானவுடன் படைப்பாளர் என்ற கருத்தாக்கம் அடிபட்டது. இலக்கியம் படைக்கப்பட்டதல்ல. ஓர் உற்பத்தி என்றவுடன் பனுவல், வரலாற்றின் உற்பத்தி, காலத்தின் உற்பத்தி, மொழியின் உற்பத்தி போன்ற எண்ணங்கள் தோன்றுகின்றன.

பனுவலின் வாசிப்பு

பனுவலில் பதிவு செய்ய முயற்சிக்கப்பட்டிருக்கும் சமூக அர்த்தங்களுக்கும் பல்வேறு வகைப்பட்ட வாசகர்களால் தங்களது சமூக அனுபவங்களால் விளங்கிக் கொள்ள உருவாக்கப்பட்ட அர்த்தங்களுக்கிடையேயும் நடைபெறும் பேரமாகவே வாசிப்பு நிகழ்கிறது. என்று குறிப்பிடும் மார்க்ஸ்,

அ) மேலாண்மையை ஏற்றுக்கொள்ளும் வாசிப்பு (Dominated Reading)

ஆ) பேர வாசிப்பு (Negotiated Reading)

இ) எதிர்ப்பு வாசிப்பு (Resistant reading) (அ.மார்க்ஸ் (1994), ப.136)

என்று அதனைப் பாகுபடுத்தியுள்ளார்.

பனுவலின் முதல் வாசிப்பில் சிலபகுதிகளின் பொருள் உடனே புரிவதில்லை. வாசகனின் மனம் சிறிது நேரத்துக்குள்ளேயே உணர்வு மற்றும் நனவிலி நிலைகளிடையே மாறி மாறிப் பயணிக்கிறது என்பதை அவனே உணர்வதில்லை. இந்தச் செயற்பாங்கு ஒரே நேரத்தில் ஒரு வாசகனுக்கும் மற்றொரு வாசகனுக்கும் இடையே வெவ்வேறாக நிகழ்கிறது. ஏனெனில் பனுவல் தானே இயங்கமுடியாது. சில சிக்கல்களுக்கு வாசகன் அளிக்கும் விடையில்தான் பொருண்மை முழுமை பெறுகிறது.

புகலிடச் சிறுகதைகளின் பனுவல் வெளிப்படும் சூழல்

புகலிடச்சிறுகதைகள் பெரும்பாலும் புலம்பெயர்ந்தோரின் மனவுணர்வுளின் வெளிப் பாடாகவே அமைந்துள்ளன. எனினும் பனுவலின் வீச்சையும் பனுவலிடையேயான உறவுநிலைகளையும், பனுவலுக்கும் வாசகருக்கும் இடையேயான தொடர்பு நிலைகளையும் புகலிடச்சிறுகதைகளின் பின்னணியில் ஆராய முடியும்.

“ஒரு பனுவல் அதற்கான சொந்தச்சூழல் இன்றி வாழமுடியாது. ஒரு பனுவல் அதன் சூழலின் பின்னணியில் தான் அர்த்தமுள்ளதாக மாறுகிறது. குறிப்பிட்ட சூழலானது அர்த்தத்தை மட்டுமன்றி அந்தப் பனுவலின் வடிவத்தையும் நிர்ணயிக்கிறது.” (ஆறு. இராமநாதன் (பதி.), மு.நா., ப. 407).

புகலிடச்சிறுகதைகளில் பனுவலின் வடிவத்தை நிர்ணயிப்பதில் சூழலுக்கு முக்கிய பங்கு வகிக்கிறது. இப்பனுவலானது மூன்று சூழல்களின் அடிப்படையில் வாசிக்கப்படுகிறது. அவற்றுள் முதலாவதாக அமைவது ஈழத்துச்சூழல்- இரண்டாவது தமிழகச்சூழல் - மூன்றாவது புகலிடச்சூழல் என்பதாகும்.

ஈழத்துச்சூழல் என்பது ஈழத்தின் போர்ச்சூழல்களுக்கிடையே வாழ்ந்து கொண்டிருக்கின்ற வாசகர்களால் வாசிக்கப்படும் பனுவலைச் சுட்டுகிறது. அதாவது ஈழத்திலே உள்ள கல்வியறிவு பெற்ற, இலக்கிய அறிவு பெற்ற மக்களால் எதிர்கொள்ளப்படுகின்ற பனுவலைக் குறிக்கிறது. போராளி இயக்க ஆதரவு ஓ போராளி இயக்க எதிர்ப்பு என்னும் எதிர்வினை கொண்டதாக ஈழத்து வாசகப்பரப்பைப் பனுவலில் அடையாளம் காணமுடிகிறது. மேலும் மலையகத்தார் / இஸ்லாமியர்கள் ஆகிய முரண்பாடு கொண்ட வாசகப்பரப்பையும் இதில் பொருத்திப் பார்க்க வேண்டியுள்ளது. எனினும் பனுவல் எடுத்துரைக்கும் சிங்களப்பேரினவாதம், போரின் கொடுமை போன்ற பனுவலின் பொருண்மையை அறியக்கூடியவர்களாக இருப்பதோடு அவற்றின் சொல்லாடல்கள் அவர்களால் பொருள் உணரத்தக்கனவாக அமைந்துள்ளன.

தமிழகத்துச்சூழல் என்பது ஈழத்தைக் குறித்த- ஈழத்து இலக்கியம் குறித்த ஆர்வலர்களால் மட்டுமே எதிர்கொள்ளப்படுகின்ற பனுவலைக் குறிக்கிறது. புகலிடச் சிறுகதைகள் கிடைப்பதற்கான வாய்ப்புநிலை பரவலாக்கம் பெறத்தொடங்குள்ள தமிழகத்துச் சூழலில் இருவேறு வாசகர்களை இப்பனுவலானது எதிர்கொள்கிறது. 1991இல் நிகழ்ந்த ராஜீவ்காந்தி கொலைக்குப் பிறகு இங்கு ஏற்பட்டுள்ள விடுதலைப்போராளி் இயக்க ஆதரவு ஒ் விடுதலைப்போராளி் இயக்க எதிர்ப்பு என்னும் இருவேறு சார்புநிலைகளைக் கொண்ட வாசகர்களால் எதிர்கொள்ளப்படுகின்ற பனுவலாகவே இது அமைகிறது. எனினும் இப்பனுவல் முன்வைக்கும் அனுபவங்களை வாசகர்கள் எதிர்கொள்ளாத காரணத்தாலும், அதில் இடம்பெற்றுள்ள சொல்லாடல்களின் பொருளை அறியஇயலாத காரணத்தாலும் அந்நியப்பட்டுப் போன நிலையையே உணரமுடிகிறது. இங்குக் குடியேறியிருக்கிற ஈழத்துப்புலம்பெயர்ந்தோர் இதனை எதிர்கொள்கிற திறம் சற்று வேறுபட்டதாக இருக்க வாய்ப்புள்ளது.

புகலிடத்துச்சூழல் என்பது ஈழத்தை விட்டுப் புலம்பெயர்ந்து உலகின் பல நாடுகளில் வாழ்கின்றவர்களால் எதிர்கொள்ளப்படுகின்ற பனுவலைச் சுட்டுகிறது. விடுதலைப் போராளி் இயக்க ஆதரவு ஒ் விடுதலைப்போராளி் இயக்க எதிர்ப்பு என்னும் எதிர்வு நிலையைக் கொண்ட வாசகர்களை இப்பனுவல் எதிர்கொள்கிறது. இப்பனுவல் எதிர்கொள்ளப்படுதலில் பல நாடுகளின் புவியியல் கூறுகளும், பண்பாட்டுக்கூறுகளும் தொடர்புடையனவாக இருத்தலால் பனுவலின் வாசிப்பு வேறுபடுவதற்கான சாத்தியக் கூறுகள் நிறையவே உள்ளன. பனுவல் முன்வைக்கும் பொருண்மையும், பனுவலில் உள்ள சொல்லாடலின் பொருளும் இவர்களோடு நெருக்கமாக அமைந்திருக்கின்ற காரணத்தால் இப்பனுவல் இவர்களால் எளிதில் எதிர்கொள்ளத்தக்கதாக அமைகிறது.

பனுவலின் பொருண்மை

அர்த்தங்களைத் தள்ளிப்போடல், வித்தியாசங்களின் விளையாட்டு என்ற குணநலன்களை மொழி மிக இயல்பாகவே தன்னகத்தே கொண்டுள்ளது. இலக்கியம் பனுவலை முதன்மைப்படுத்துவதால் மொழியின் கட்டற்ற விளையாட்டையும் அதன் தனித்தன்மையையும் ஆதரிப்பதாக மாறிவிடுகிறது. இலக்கியப்பனுவல்கள் கட்டமைக்கப்பட்டவையாகவோ அல்லது மையம் உடையவையாகவோ உள்ளன. இம்மையம் ஒரு எண்ணமாக இருக்கலாம். பண்டை இலக்கியங்களில் மையம் அமைக்கப்பட்டதோடு அதைச் சுற்றி மொழியின் கட்டற்ற விளையாட்டு உண்டானதுபோல் தற்கால இலக்கியப் பனுவல்களிலும் ஒரு மையத்தைச் சுற்றி மொழிகளின் விளையாட்டு வடிவமைக்கப்படுகிறது. இதைத்தான் மையத்திற்கான தேவையை வலியுறுத்துகின்ற உணர்வு எனக்குறிப்பிட்டு அதனை நவீன சொல்மையவாதம் என்று தெரிதா குறிப்பிட்டுள்ளார்.

புகலிடச்சிறுகதைகளின் பனுவல்களும் கட்டமைக்கப்பட்டவையாக, மையங்களைக் கொண்டவையாக அமைந்துள்ளன. புகலிடச்சிறுகதைகளின் பனுவல்களில் பின்வரும் மையங்களை ஊகித்தறிய அறியமுடிகிறது.

1. வாழ்க்கை குறித்த அச்சம்,
2. எதிர்காலம் குறித்த கனவுகள்,
3. தொலைந்துபோன கடந்தகாலம்
4. காட்சிப்பதிவுகள்

இவை அனைத்தையும் ஒருங்கிணைத்து 'மனவுணர்வு' என்னும் ஒற்றைப்படுத்தலுக்குக் கொண்டுவரமுடிகிறது. இத்தகைய பனுவல்களின் பொருண்மையை வாசகர் அறிந்துகொள்வதற்கு ஏற்ப, பனுவலின் சூழலைப் பல சிறுகதைகளில் படைப்பாளர்கள் குறிப்பிட்டுச் செல்கின்றனர். பனுவலுக்குரிய பொருண்மையை உணருவதற்குரிய வாசகனின் உரிமையில் இது சில நேரங்களில் பங்கு போட்டுக்கொள்வதாக அமைகிறது.

பனுவலின் வீச்சுகள்

பொருண்மைப்படுத்தலை அமைப்பியல் குறிப்பிடும் பனுவலின் நிலையில் மட்டும் நோக்குவதை விட பனுவலின் வாயிலாக ஆசிரியரின் இருப்புநிலையையும் சார்புநிலையையும் அறிந்துகொள்வது வாசிப்பை வாசகர் மேலும் செழுமைப்படுத்த

துணைபுரியும் எனலாம். பனுவலின் வாயிலாக அதன் வீச்சினை அறிந்துகொள்வதில் இடம், காலம் குறித்த சொல்வழக்குகள் முக்கியத்துவம் பெறுகின்றன. சில இடங்களில் படைப்பாளின் - கதைசொல்லியின் அரசியலை இது அடையாளம் காட்டிவிடுகிறது. இத்தகைய பொருண்மைகளைப் பெறுவதற்குச் சில நிலைகளில் புறநிலைவாசிப்பும் சில நிலைகளில் புதைநிலை வாசிப்பும் தேவைப்படுகின்றன.

புகலிடச்சிறுகதைகளின் பனுவலானது பிறப்பிடம், புகலிடம் என்னும் இரு களங்களில் கதையானது எதில் மையம் கொண்டுள்ளது என்பதை வாசகர் உணர்ந்துகொள்ள அனுமதிக்கிறது.

இடம் குறித்த சொல்லாடல்

புகலிடத்தின் வாழ்க்கை முறையும் பிறப்பிடம் குறித்த மனஏக்கமும் பனுவலின் வாயிலாக வெளிப்படுத்தப்படுவதால் களம் குறித்த பதிவு பனுவலில் வெளிப்படுகிறது.

தேவகாந்தனின் 'தீயில் கரைந்த சீதை' என்னும் சிறுகதையின் பனுவலானது பிரான்ஸ் என்பதைக் களமாக வாசகனுக்கு எளிதில் புலப்படுத்திவிடுகிறது. கருணாகர மூர்த்தியின் 'பகையே ஆயினும்' சிறுகதையின் பனுவலைக் கொண்டு களம் எதுவென்பதை முதலில் வாசகன் உணரமுடியவில்லை எனினும் 'எதிர்வீட்டுத் துருக்கிக்காரன்' என்னும் மொழிவழக்கு வாசகனுக்கு அயல்நாடாக இருக்கலாம் என்னும் பொருண்மையை உணர்த்துகிறது. வாசகன் தொடர்ந்து மேலும் வாசித்த போதிலும் எந்தநாட்டு நிகழ்ச்சிகள் என்பதை அவனால் அறியமுடியாதவாறு இக்கதையின் பனுவலானது அமைந்துள்ளது.

காலம் குறித்த சொல்லாடல்

புகலிடச்சிறுகதைகளின் கதைநிகழ்வுகள் நிகழும் காலம் எதுவென்பதைப் பனுவல் வாசகனுக்கு நேரிடையாகவோ குறிப்பின் வாயிலாகவோ உணர்த்திவிடுகிறது.

சக்கரவர்த்தியின் 'படுவான் கரை' சிறுகதையில் இடம்பெற்றுள்ள மெலிதான காற்று, உஷ்ணத்தின் வெளிநடப்பு, நாயின் ஊளை, பறவையின் திசைமாற்றம் என்னும் பனுவல் இரவுநேரத்தை உணருவதற்கு வாசகனுக்கு உரிமையை வழங்கியுள்ளது. இரவுநேரம் என்பதை உணருவதில் வாசகனுக்கு இடர்ப்பாடு ஏற்படுவதைத் தவிர்க்கும் வகையில் "முகம் தெரியாத இருட்டு. ஊர் உறங்கி நெடுநேரமாகி இருந்தது" என்று பனுவலின் நீட்சி தொடர்வது இரவின் மணிநேரத்தை வெளிப்படுத்தும் ஒன்றாக அமைந்துள்ளது.

கதைமாந்தர் குறித்த சொல்லாடல்

வாசகன் பனுவலின் சொல்லாடல் வாயிலாகக் கதைமாந்தர்களின் பண்புநலன்களை அறிந்துகொள்கிறான். எனினும் கதைமாந்தர் குறித்த அவனது மனப்பதிவுகள் அவன் பனுவலோடு தன்னை இணைத்துக்கொள்ளும் செயற்பாங்கின் வாயிலாக வெளிப்படுகிறது. முதல்வாசிப்பின்போது பனுவலானது குறிப்பிட்ட கதைமாந்தரின் தோற்றம், செயல் குறித்த அறிமுகநிலையில் மட்டுமே வாசகனுக்குப் புலப்படுகிறது. இது உடனடியாகத் தோன்றும் பொருண்மையாகவே அமைகிறது. மீண்டும் மீண்டும் பனுவலை வாசிப்புக்கு உட்படுத்தும்போது கதைமாந்தர்களின் மனவுணர்வுகளையும் செயலின் பின்னணியையும் அடையாளம் கண்டறியமுடியும். எனினும் இதனை அறிகின்ற திறம் என்பது வாசகரின் வாசகநிலையைப் பொறுத்து மாறுபடவும் கூடும். மாத்தளையோழுவின் கச்சாத்தீவு சிறுகதையின் பனுவல்களைத் தொடர்ந்து வாசித்துச் செல்லும்போது கச்சாத்தீவு தாத்தா என்னும் பெயருக்கான பின்னணியையும் அவருடைய செயல்களையும் வாசகனால் அறிந்துகொள்ளமுடிகிறது.

கதைசொல்லியின் பங்கேற்புநிலை

பனுவலானது கதைசொல்லி கதைகூறும் முறையையும் கதைசொல்லலின் வகையையும் அடையாளப்படுத்துகிறது. தன்மைநிலைக்கதைசொல்லல், படர்க்கை நிலைக் கதைசொல்லல் என்னும் முறையை வாசகனுக்கு உணர்த்துகிறது.

கலாமோகனின் 'மூன்று நகரங்களின் கதை'யின் பனுவல் தன்மைநிலைக் கதை சொல்லலை உணர்த்துகிறது. எஸ்.பொ.வின் ஒரு யானைக்கதை வாசகரையும் உள்படுத்திகின்ற உள்பாட்டுத்தன்மைநிலையில் கதைசொல்லப்படுகிறது என்பதைத் தெரிவிக்கிறது. குமார்மூர்த்தியின் 'வாழைக்குலை' சிறுகதையில் கதைசொல்லும் பாடர்க்கைத்தன்மையை வாசகர் உணர்ந்துகொள்ள முடிகிறது. மேலும் கதைசொல்லி முதன்மைக் கதைமாந்தராகவோ, துணைமைக் கதைமாந்தராகவோ பார்வை-யாளராகவோ பங்கேற்கும் நிலையையும் பனுவலானது உறுதிசெய்கிறது.

கதைசொல்லியின் அரசியல்

அனைத்து இலக்கியப் படைப்புக்களும் எழுத்து வடிவில் இருப்பதால் அடையாளமுறையில் சிலவற்றைச் சொல்லும். புதினத்திலும் சிறுகதையிலும் வேறு சில வடிவங்களிலும் இந்த அடையாளங்களிலும் ஒன்றாக ஒரு குரல் வருவதுண்டு. இந்தக் குரல் ஆசிரியனுடையதென்று தவறாகக் கருதப்படுகிறது. ஆனால் இது கதைசொல்லியின் குரலே ஆகும். சிறுகதைக்குள் உள்ள கதைசொல்லியைக் கண்டுபிடித்து சிறுகதையின் குரலைக் கண்டுபிடிப்பதும் அக்குரலின் சாதி, அரசியல் மற்றும் மதசார்புகளைப் பார்ப்பதும் கேட்போரின் தன்மையை அடையாளம் காண்பதும் திறனாய்வாளரின் பணியாக அமைகிறது.

கதைசொல்லியின் நம்பிக்கை, விழுமியங்கள், அறிவுசார் நிலைப்பாடு ஆகியவற்றையும் மக்கள், நிகழ்ச்சிகள், பொருள் ஆகியவை நோக்கிய அவரது மனஉணர்வையும் பனுவலானது வெளிப்படுத்துகிறது. கதைசொல்லியின் சார்புநிலைக்குச் சான்றாக, கிறிஸ்தியனின் 'நதியினில்' சிறுகதையில் உள்ள "நான் பரலோகத்தில் இருக்கிற எங்கள் பிதாவே, உம்முடைய நாமம் அர்ச்சிக்கப்படுவதாக, உம்முடைய இராச்சியம் வருக. உம்முடைய சித்தம் பரலோகத்தில் செய்யப்படுவதுபோல் பூலோகத்திலும் செய்யப்படுவதாக. இறந்த இந்த ஆத்மா சாந்தி அடைவதாக என்று இரு கைகப்பி வேண்டிக்கொண்டேன்" (மா. கி. கிறிஸ்தியன், 2005, ப. 95) என்னும் பனுவலைச் சுட்டலாம். கதைசொல்லியின் குரலில் கிறித்தவசமய சார்புநிலையை உணரமுடிகிறது. சக்கரவர்த்தியின் ... இதன் இரண்டாம் பாகமும் சிறுகதையில் போராளிகள் மலையகத் தமிழரோடும் இஸ்லாமியர்களோடும் கொண்டிருந்த பகையை எடுத்துக்காட்டும் நிலையில் போராளி இயக்க எதிர்ப்புக்குரலை வாசகன் உய்த்துணரமுடிகிறது. குமார் மூர்த்தியின் 'உபயம்' சிறுகதையில் கதைசொல்லியின் சாதிய ஆதிக்கமனவுணர்வை அறிந்துகொள்ளலாம். அவ்வாறே கதைசொல்லியின் அறிவுசார்நிலைப்பாடு, மனவுணர்வு, எள்ளல் தன்மை ஆகியவற்றையும் பனுவல் உணர்த்துகிறது.

பனுவலுடனான வாசகர் உறவுநிலை

ஒவ்வொரு கதையாடலிலும் கதைசொல்லி, கதைகேட்குநர் என்னும் இருவேறு நிலைப்பாடுகளைக் கண்டறியமுடியும். வாய்மொழிவழக்காறுகளில் நேரடியான தொடர்பு கொண்டிருந்த இவ்விருவரும் எழுத்து இலக்கியங்களில் மறைமுகமான உறவுநிலையைப் பெற்றிருக்கின்றனர். இத்தகைய இலக்கியங்களின் பனுவலோடு வாசகன் வாசிப்புச் செயற்பாட்டின்போது தொடர்பு கொண்டு தனக்குரிய இடத்தைக் கைப்பற்றிக் கொள்கிறான். கதைசொல்லியின் குரலாலும் நிகழ்வுகளின் தொடர் வரிசையாலும், நிகழ்வுகளை கண்டுணரும் வாசகர் தன்அனுபவங்களோடு பொருத்திப் பார்க்கும் முறையாலும் பனுவலுடனான வாசகர் உறவுநிலை வெளிப்படுகிறது.

எஸ். பொ. 'பணம்' என்னும் சிறுகதை இலங்கையில் வெவ்வேறு காலங்களில் நிகழ்ந்த பண்பரிமாற்றத்தைப் புனைவோடு பதிவுசெய்துள்ளது. ஆனால் அதனை நிறைவுசெய்யும்போது,

பழைய காலத்திலே நனவிடை தோய்தல் செய்ய அழைப்பதாகக் கூறி இப்படிப் பாரிய பொருளாதாரச் சிக்கல்களுக்குள் உங்களை மாட்டி வைக்கக்கூடாதுதான். மன்னிப்பை வேண்டுகிறேன். நொடிபோடுவதும் அவிழ்ப்பதும் அந்தக் காலத்தில் மிக முக்கியமான பொழுதுபோக்கு. வட்டவட்டக் குருவி. வாலில்லாத குருவி. அது என்ன? என்ற நொடியைச் சொல்லி வெண்தாடிக் கிழவர் எங்களைத் திகைப்பில் ஆழ்த்தியதுண்டு. காசு

பற்றி யாழ்ப்பாணத்தில் புழக்கத்திலிருந்த நொடி இது. சில்லறைக் காசுகள் பற்றிய நினைவிலே தோய்ந்து 'ஐம்பது ஆண்டுகளுக்கு முற்பட்ட சில்லறைகளும் நாணயங்களும் வாழ்க' என்று தொண்டை கிழியக் கத்தும் உரிமை என்வசத்து என்பதை நீங்கள் மறுக்கமாட்டீர்கள். (எஸ். பொ. (2003), ப. 36)

என்று கதைசொல்லி வெளிப்படுத்தியுள்ளார்.

இதன் வாயிலாகப் பழங்கதைகளை வெளிப்படுத்தும் பனுவல் சில வாசகங்களுக்கு ஆர்வத்தையும் சிலருக்கு எரிச்சலையும் உண்டாக்கிவிடக்கூடும் என்னும் வாசகர் மனவுணர்வின் வேறுபாடு வெளிப்படுகிறது. இந்த மனவுணர்வைக் கருதியே கதைசொல்லியின் சமாதானக்குரலாக இது அமைந்துள்ளது. "மன்னிப்பை வேண்டுகிறேன்" என்னும் பனுவலானது வாசகருக்கு நேரிட வாய்ப்பிருக்கின்ற இடர்ப்பாடு என்பதை உணர்த்துவதாகவும் நொடி என்னும் பனுவலானது விடுகதை என்பதைக் குறித்து வழங்கிவரும் ஈழத்துச்சொல்லாடல் என்பதாகவும் அமைந்துள்ளது. எனினும் "தொண்டை கிழியக் கத்தும் உரிமைஎன்வசத்து என்பதை நீங்கள் மறுக்க மாட்டீர்கள்" என்னும் பனுவலில் சிறுபிள்ளைகளுக்குக் கதைசொல்லப்படுகிறதா? என்னும் ஐயத்தை வாசகருக்கு ஏற்படுத்திவிடக்கூடாது என்னும் எச்சரிக்கை உணர்வாக அமைகிறது.

கட்டவிழ்ப்பு

அமைப்பியலோடு தொடர்புள்ள ஆனால் அமைப்பியலுக்கு எதிரான கட்டவிழ்ப்பு என்ற திறனாய்வு முறை செல்வாக்கு பெற்றிருக்கிறது. அமைப்பியல் எதிர்வுகளை முதன்மைப்படுத்தியது. கட்டவிழ்ப்பியல் இதனை நிராகரித்தது. கட்டுடைத்தல் விமர்சனம் என்பது குறிப்பிட்ட ஒரு இலக்கியப் படைப்புப்பொருளின் அமைப்பை அப்படியே விளக்கிவிடுவதும் ஆகாது. அப்படைப்பின் அமைப்பை அப்படியே பதிவு செய்வதும் ஆகாது. மாறாக கட்டுடைத்தல் விமர்சனம் அவ்விலக்கியப் பனுவலானது எப்படி அமைப்பாக்கம் பெற்றுவிடுகின்றது என்பதை நிகழ்த்திக்காட்டுவதாகும்.

எந்த ஒரு பிரதியின் அமைப்பாக்கமும் வரலாறு நெடுகவும் வாசகனுக்கு வாசகன் என்கிற அளவில் மாறுபட்டுவருகிற ஒன்றாகும். அதே நேரத்தில் அமைப்பாக்கம் என்பது படைப்பின் சொற்கூட்டத்திலேயே தங்கியிருப்பதும் ஆகும். எனவே ஒரு பிரதியை காரண- காரியத் தொகுப்பு ஒன்றின் விளைவாக கட்டுடைத்தல் விமர்சனம் கருதுவதில்லை. மாறாக அப்பிரதியானது தனது அர்த்தத்தளங்களில் எவ்வாறு சிறிப்பாய்ந்து கொண்டிருக்கிறது என்பதைத்தான் கட்டுடைத்தல் விமர்சனம் காண்கிறது. (நாகார்ஜுனன், 1991, ப. 98)

புகலிடச்சிறுகதைகளில் இத்தகைய கட்டவிழ்ப்பு முயற்சிகளைக் காணமுடிகிறது. எஸ்.பொ.வின் ஆண்மைத்தொகுப்பில் உள்ள எட்டாம் கதையில் கட்டவிழ்ப்பினைக் கண்டறியமுடிகிறது. இயேசுவையும் சாத்தானையும் இணைத்துக் கதை படைத்துள்ளார். 'இயேசு- சாத்தான் கதை'யும் சிங்கராயர்-இன்னாசிமுத்துக்கதையும் மாறி மாறி சொல்லப்படுகின்றன. யோவானிடம் இயேசு திருமுழுக்குப் பெறுகிறார். சாத்தான் அவரை அச்சுறுத்தினான். ஆனால் இயேசுவிடம் தடுமாற்றம் இல்லை. சிங்கராயர்-இன்னாசிமுத்துக் கதைக்குள்ளும் இயேசு-சாத்தான் கதை ஊடுருவியுள்ளது. கடவுளின் நன்மையான படைப்புகளைப் படைக்கச் சாத்தான் தீமைகளைப் படைத்தான். கடவுள் கலங்கவில்லை. ஆனால் சாத்தான் மொழிகள், மதங்களைப் படைத்தான். கடவுளுக்கு இனி வெற்றி இல்லை. கடவுள் சாத்தானுக்கு அடிமையானார் என்று கதை முடிவடைகிறது.

சிலப்பதிகாரம் என்னும் காப்பியத்தின் கதையமைப்பைக் கட்டவிழ்ப்பு செய்து சிறீசுவின் 'சிறைப்பதிகாரம்' படைக்கப்பெற்றுள்ளது. புகூர்க்காண்டம், மனையறம் படுத்தால் வினைத்திறம் கடுத்த காதை, சனியனின் அரங்கேற்றுக் காதையும் அணங்கேற்றுக் காதையும், அந்தவாலை (அமர்) விறைப்புச்செய்காதை, கண்டகனா

(ச்சுருக்கம்), மாதுரைக் காண்டம், வஞ்சித்த காண்டம் என அமைப்பைக் கட்டுடைத்து மேற்கொள்ளப்பெற்ற கட்டவிழ்ப்புமுயற்சியாக இச்சிறுகதை அமைந்துள்ளது. பெண்ணகி, கேவலன், மாதுவி எனக் கதைமாந்தர்களைக் கொண்டு அமைந்த இச்சிறுகதை பாலியல் உணர்வுகளை மையமிட்டு மறுவாசிப்பு செய்யப்பட்டதாகவே அமைந்துள்ளது. மேற்கண்ட கதைகளை முழுமையான கட்டவிழ்ப்பு முயற்சியாகக் கருதமுடிகிறது. ஆனால் பல சிறுகதைகளில் பனுவலின் ஊடாகக் கட்டவிழ்ப்பு முயற்சி மேற்கொள்ளப்பட்டுள்ளதைக் கவனிக்க முடிகிறது.

சக்கரவர்த்தியின் 'முதிர்கன்னி' சிறுகதையின் பனுவல் கடவுள் பற்றிய பிரமையை உடைக்கும் முயற்சியாக அமைந்துள்ளது. முத்துலிங்கத்தின் 'குங்கிலிக்கலயநாயனார்' 'சிறுகதை பக்தியைப் போதையாகக் கட்டுடைத்துள்ளது. மாத்தளை சோழுவின் 'பூக்கடை' சிறுகதை இங்கிலாந்து இளவரசி டயானா குறித்துக் கட்டமைக்கப் பெற்றுள்ள கருத்தாடலுக்கு எதிரான கட்டவிழ்ப்பை வெளிப்படுத்துகிறது. சுமதிபுனின் 'அகச்சுவருக்குள் நான்' சிறுகதையில் ஆணாதிக்கச் சமூகமானது கட்டமைத்து வைத்திருக்கிற பெண்ணின் உடல் குறித்த பதிவுகள் தகர்க்கப்பெற்றுள்ளன. இவ்வாறு மேலும் பல கதைகளின் பனுவல் ஊடாக கட்டவிழ்ப்பு முயற்சிகளை அறிந்து கொள்ளமுடிகிறது.

தொகுப்புரை

புகலிடச்சிறுகதைகளின் பனுவலானது ஈழத்துச்சூழல், தமிழகச்சூழல், புகலிடச்சூழல் ஆகிய மூன்றுசூழல்களில் வாசிக்கப்படுகிறது. ஈழத்துச்சூழல் பார்ப்பன வெள்ளாளர் இருப்புநிலையையும் தமிழகச் சூழலும் புகலிடச்சூழலும் போராளி இயக்க ஆதரவு. எதிர்ப்பு என்னும் முரண்நிலையையும் கொண்டு அமைந்துள்ளன. வாழ்க்கை குறித்த அச்சம், எதிர்காலம் குறித்த கனவுகள், தொலைந்துபோன கடந்தகாலம், காட்சிப்பதிவுகள் ஆகியன பனுவலின் மையங்களாக அமைகின்றன. இடம், காலம், கதைமாந்தர்களைக் குறித்த சொல்லாடல்களைப் பனுவலின் வாயிலாக உணரமுடிகிறது. மேலும் கதைசொல்லியின் நம்பிக்கை, விழுமியங்கள், அறிவுசார் நிலைப்பாடு ஆகியவற்றையும் மக்கள், நிகழ்ச்சிகள், பொருள் ஆகியவை நோக்கிய அவரது மனஉணர்வையும், புகலிடச்சிறுகதைகளின் பனுவல் வெளிப்படுத்துகிறது

துணைநூல்கள்

1. இராமநாதன். ஆறு (பதி.), நாட்டுப்புறவியல் கோட்பாட்டுப் பார்வைகள், தென்னிந்திய மொழிகளின் நாட்டுப்புறவியல் கழகம், திருவனந்தபுரம், முதற்பதிப்பு, 2003.
2. எஸ். பொ., நனவிடைதோய்தல், மித்ர ஆர்ட்ஸ் மற்றும் கிரியேஷன்ஸ், சென்னை, முதற்பதிப்பு, 2003.
3. கிறிஸ்டியன், மா. கி., புலமும் புறமும், அடையாளம் வெளியீடு, புத்தாந்தம், முதற்பதிப்பு, 2005.
4. தமிழவன், தமிழும் குறியியலும், உலகத்தமிழாராய்ச்சி நிறுவனம், சென்னை, முதற்பதிப்பு, 1992.
5. நாகார்ஜுனன், கலாச்சாரம் அ-கலாச்சாரம் எதிர்கலாச்சாரம், கார்முகில் பதிப்பகம், மதுரை, முதற்பதிப்பு, 1991.
6. பூரணச்சந்திரன், க., அமைப்புமையவாதமும் பின்அமைப்புவாதமும், நிகழ் வெளியீடு, கோவை, முதற்பதிப்பு, 1991.
7. பூரணச்சந்திரன், க., இலக்கியப்பயணத்தில் சில எதிர்ப்பாடுகள், சிந்தியன் பதிப்பகம், சென்னை, முதற்பதிப்பு, 2004
8. மார்க்ஸ், அ., உடைபடும் மௌனங்கள், விடியல் பதிப்பகம், உப்பிலிபாளையம், கோவை, முதற்பதிப்பு, 1994
9. முத்துக்குமாரசாமி, எம். டி., பிற்கால அமைப்பியலும் குறியியலும், தமிழ்த்துறை ஆய்வுமையம், தூய சவேரியார் தன்னாட்சிக் கல்லூரி, பாளையங்கோட்டை, முதற்பதிப்பு, 1988.

பெண்ணிய நோக்கில் அறிவியல் புனைகதைகள்

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தூய வளனார் தன்னாட்சிக் கல்லூரி
திருச்சிராப்பள்ளி

ஒடுக்கப்பட்டவர்களை அரசியல் மையப்படுத்துதல் என்பது, அவர்களோடு உரையாடுவதும் விழிப்புணர்வை ஏற்படுத்துவதும் தமக்கும், ஒட்டுமொத்தமாக சமூகத்திற்கும் விடுதலை பெற்றுத்தர தேவைப்படும் அறிவினை வழங்குவதும் ஆகும். இவ்வகையில் ஒடுக்கப்பட்ட இனமான பெண்களுக்கு அவர்களது உரிமைகள் குறித்து அறிவூட்டுவதும், பாலினச் சமத்துவத்திற்காகப் போராட அறிவுறுத்துவதும் பெண்ணியம் என்றழைக்கப்படுகிறது. இருப்பினும், தாம் ஒடுக்கப்படுகிறோம் என்று உணர்ந்து அதற்கெதிராகப் போராடும் சாதி, இனம், வர்க்கம் போன்ற மற்ற விடுதலை இயக்கங்கள் போல் அல்லாமல், பெண் விடுதலை இயக்கங்கள் நூதனமான ஒரு சவாலை எதிர்கொள்ள வேண்டியுள்ளது. பெண் அடிமைத்தனம் என்பது இயற்கையானது என்று விதைக்கப்பட்டுவிட்ட ஆழமான நம்பிக்கைகளை முதலில் தகர்த்தெரிய வேண்டியுள்ளது.

எதிர்பாலினம் மற்றும் குடும்பத்தினரோடு கொள்ளும் உறவென்பது மனித வாழ்வின் ஒரு முக்கிய அம்சமாக இருக்கிறது. இருப்பினும், மாபெரும் சமூக அமைப்பில் அச்சிறிய செயல்பாடானது, ஏற்றத்தாழ்வு நிறைந்ததாகவே உள்ளது. இதனால் பெண்கள் குடும்பம், சமூகம் ஆகிய இரு தளங்களில் “இரட்டை ஒடுக்குமுறைக்கு” உள்ளாகிறார்கள். இத்தகைய இரட்டை ஒடுக்குமுறைகள் அறிவியல் புனைகதைகளில் எங்ஙனம் சித்திரிக்கப் பெற்றுள்ளன என்பதை ஆராய்வதாக இக்கட்டுரை அமைகிறது.

பெண்கள் குறித்த ஆணாதிக்கச் சிந்தனைகள்

ஆண்டாண்டு காலமாகப் பெண்ணைத் தாழ்த்தியே வாழ்ந்த ஆணினம் அவ்வளவு சுலபமாகத் தன் பிடியிலிருந்து பெண்ணை விட்டுவிட இயலாது என்ற பிற்போக்குச்சிந்தனையைக் கொண்டுள்ளது. இதனால்தான் கல்வியில், பணியில், உயர்பதவியில், பொருளாதாரத்தில், அதிகாரத்தில், பெண் ஆணுக்கு இணையாக நின்றாலும் அவளை ஒரு போகப்பொருளாகப் பார்க்கும் நிலை மாறவில்லை. இதனை,

நீ ஒரு பெண். ஒரு போதைப்பொருள். நீ ஒரு அழகான உடல். உள்வட்டத்திற்கு ஏற்பட்ட மானிட மெத்தை... உன் போன்று முன்னாறு பெண்கள் இருக்கிறார்கள். நீ தேவையில்லை! உன்னைக் கொன்று விடலாம். (சுஜாதா, 2009, ப. 117)

என்னும் ஜீவாவின் கூற்று வெளிப்படுத்தியுள்ளது.

ஆணாதிக்கச் சமூகத்தின் இத்தகைய போக்கு அறிவியல் தொழில்நுட்பம் வளர்ந்தாலும் மாறாததற்கு உரிய காரணத்தை ராஜ்கௌதமன்,

பெண்ணின் பாலியல் ஒழுக்கம் ஆணைச் சார்ந்து அவனால் இயக்கப்படுவதாக இருந்தது. ஆனால் ஆணின் பாலியல் ஒழுக்கம் அவனைப் பொறுத்தவரை ஒரு சொகுசு! பரத்தை என்னும் விலைமகள். பொதுமகளிடம் போகாத கணவனுக்குக் கூடுதலாகப் புகழ். அதற்காகப் பரத்தையிடம் போகும் ஆணை ஒரு பரத்தன் என்று யாரும் பழிக்கவில்லை. ஆணின் பாலியல் ஒழுக்கம் அன்று பொதுவாக ஒத்துக் கொள்ளப்பட்ட ஒழுக்கவியலின் ஒரு பிற்சேர்க்கை (Supplement) போலக் கருதப்பட்டது. (ராஜ்கௌதமன், 2006, ப. 23)

என்று குறிப்பிடுவது இங்குக் குறிப்பிடத்தக்கது.

இல்லறத்தின் பெயரால் ஒடுக்குதல்கள்

கணவனை மட்டும் நம்பி வாழும் பேபி சரோஜா என்னும் பெண்ணின் கணவன் பொறுப்பில்லாமல் வீட்டிலுள்ள பொருள்கள் யாவையும் விற்று மது, மாதுவிற்காகச் செலவழிக்கிறான். திடீரென ஒருநாள் அவன் தலைமறைவான பிறகு பேபி சரோஜா, வாழ வழியில்லாமல் தன் மகனுடன் சென்னையில் உள்ள தன் அண்ணன் வீட்டிற்குச் சென்று சேர்கிறாள். அங்கு அண்ணியின் ஒடுக்குமுறைக்கு இருவரும் ஆளாகிறார்கள். இதனை,

அம்மா வந்ததும் மாமி செய்த முதற்காரியம் வீட்டு வேலைக்காரியை வேலையைவிட்டு நிறுத்தியதுதான். ஏனெனில், ஒரு வீட்டுக்கு இரண்டு வேலைக்காரிகள் தேவை இல்லை. அல்லவா? துணி துவைத்தல், பாத்திரம் தேய்த்தல், சமைத்தல் போன்றவை அம்மாவின் வேலையாயிற்று. கடைக்குப்போதல், காய்கறி வாங்குதல், நரேஷைக் கவனித்துக் கொள்ளுதல் போன்றவை என் வேலையானது. ஊரில் அப்பா தண்டித்தது போதாதென்று சென்னைக்கு வந்து நாங்கள் இரண்டாம் முறையாகவும் தண்டிக்கப்பட்டோம். (எம்.ஜி.சுரேஷ், 2003, ப. 56)

எனப் பேபி சரோஜாவின் மகன் நரேந்திரன் கூறுவதிலிருந்து இல்லறத்தில் பெண்களுக்கு ஏற்படும் சிக்கல்கள் எதிர்காலத்திலும் தொடரும் என்பதை எம். ஜி. சுரேஷின் '37' புதினம் தெளிவுப்படுத்துகிறது.

பாலியல் வன்முறைகள்

மனிதரிடையே இருக்கும் இயல்பான உணர்வுகளில் ஒன்றுதான் பாலுணர்வு. சமூக அக்கறை கொண்ட சான்றோர்கள் ஆரோக்கியமாக மனித சமூகம் மலர, பாலுறவிற்குச் சில கட்டுப்பாடுகளையும் வரையறைகளையும் வகுத்துள்ளனர். ஒருவன் அக்கட்டுப்பாடுகளையும் வரையறைகளையும் மீறும் போது அதை சமூகம் குற்றமாகக் கருதப் படுகிறது.

மனிதனின் உளவாழ்வுக்கு பாலுணர்ச்சியே ஆதாரமாகும், அவனின் தனித்த குணங்கள், குடும்ப உறவுகள், சமுதாய உறவுகள் ஆகிய அனைத்தும் பாலுணர்ச்சி அடிப்படையில் தான் நிகழ்கின்றன. மேலும் உள வாழ்வின் உந்துசக்தியாகப் பாலுணர்ச்சி விளங்குகின்றது. அதே போல் உள்ளம் இயங்குவதற்கான இயங்கு சக்தியாகப் பாலுணர்ச்சி விளங்குகிறது. (அந்தோனி ஸ்டோர், 2005, ப. 153)

என்று .:பிராய்டு கூறுகிறார்.

மனித வாழ்வுக்கு உண்ணும் உணவைப் போல பருகும் நீரைப்போல் இன்றியமையாத வேண்டப்படுகின்ற ஓர் இயற்கையான தேவையே பாலுணர்வு. (அந்தோனி ஸ்டோர், 2005, ப. 99)

என்கிறார் பெர்ட்ராண்டு ரஸ்ஸல்.

ஆர்னிகா நாசரின் 'தோழன்' என்ற அறிவியல் கதையில் பெண்கள் போகப் பொருளாகத்தான் இருந்திருக்கிறார்கள் என்பதை,

நமது ஜாதி தோழிகளுடன் உடலுறவு கொண்டோம். சுகம் சுகம் பரமசுகம்! அதற்குத் தண்டனை உண்டு என்பது அறிந்தே உயர்ஜாதிப் பெண்களை உறவுக்கு அழைத்தோம். முதலில் பயந்தார்கள். பின் திரிலுக்காகச் சம்மதித்தார்கள். உறவுக்குப் பின் அசந்து போனார்கள். நாம் சிறப்பான காதல் மன்னர்கள் என்பதை மனதார ஒத்துக்கொண்டார்கள். நம்மிடம் வருவதற்கு அவர்களுக்குள் பலத்த போட்டி. (ஆர்னிகா நாசர், 2001, ப. 25)

என்பதன் மூலம் அறிய முடிகிறது.

எம். ஜி. சுரேஷின் '37' புதினத்தில், சுப்புலட்சுமி தனியார் இரும்புக் கடையில் வேலை செய்கிறாள். அக்கடையில் வேலை செய்யும் ஓர் இளைஞன் பாலியல் தொல்லைகள் கொடுத்துக் கொண்டு இருக்கிறான். அதைத் தாங்கமுடியாத அப்பெண் கடை முதலாளி

டாண்டனிடம் புகார் செய்கிறாள். ஆனால் கடையின் முதலாளியும் இவளிடம் பாலியல் சீண்டல்களைத் தொடர்கிறான். இதனை,

வேறு வழியில்லாமல் (அப்படித்தான் சுப்பு சொன்னாள்) டாண்டனிடம் இந்த அத்துமீறல்கள் பற்றிப் புகார் செய்திருக்கிறாள். தன்னுடைய கடையில் குத்துக்கல் மாதிரிதான் ஒருத்தன் இருக்கையில் தன்னைத் தவிர வேறு ஒருத்தன் சுப்புலட்சுமியை உரசுவதில் அவனுக்கு உடன்பாடு இல்லை. இதனால் உடனடியாக அவனை வேலையை விட்டு நீக்கினார். (எம். ஜி. சுரேஷ், 2003, ப. 56)

என்று நேர்த்திரன் கூறுவதன் மூலம் ஆண்களின் பாலியல் வக்கிர மனப்பான்மைக்குப் பெண்கள் ஆளாகும் நிலையை அறிய முடிகிறது.

பெண்கள் வெறும் பிள்ளை பெறும் எந்திரமாகவே பார்க்கப்படுகிறார்கள் என்பதை,

பெரியவரின் அறை வாசலில் அந்தப் பெண் சிரித்தாள். வெளிறிப் போயிருந்த உதடுகள், கல்யாணத்துக்கு இருக்கிறாள்... கட்டிடத்திலேயே அவளைச் சமாளிப்பதற்கு ஆள் இல்லை. பயப்படுகிறார்கள். எனினும்... எனினும் அவள் ஒரு பெண்... ஒரு பிரஜாவிருத்தி இயந்திரம். மிகத் தேவையான இயந்திரம். (சுஜாதா, 2008, ப. 125)

என்று சுஜாதா 'சூரியன்' என்ற கதையில் சுட்டிக்காட்டியுள்ளார்.

எதிர்காலத்தில் பெண்கள் தங்கள் அடையாளங்களை மறைத்து, காட்சிப்பொருளாகவும் வாழுகின்ற குழந்தை ஏற்படும் என்று அறிவியல் புனைகதைகள் சித்திரிக்கின்றன. சுஜாதாவின் 'வாசனை' என்ற சிறுகதையில், நவா உலகத்தில் பெண்களே கிடையாது. இருக்கும் பெண்கள் செயற்கையாக உருவாக்கப்பட்டவர்கள், நிஜப்பெண்கள் மொத்தம் ஒன்பது பேர் தான். அவர்களும் அரசாங்கத்தால் பாதுகாக்கப்பட்டுக் காட்சிப்பொருளாய் வைக்கப்பட்டுள்ளனர். ஆனால் நூற்றிற்கும் மேற்பட்ட பெண்கள் தங்கள் அடையாளங்களை மாற்றி வாழுகின்றனர். காரணம்,

ஒன்பது பெண்கள் தான் என்று அரசு சொல்வது தப்பு. இந்த நகரிலேயே நூற்றுக்கணக்கான பெண்கள் இருக்கிறார்கள். அவர்களைக் கண்டுபிடிப்பதுதான் கஷ்டம். மிகத் திறமையாகத் தங்களுக்குச் செயற்கை உறுப்புகள் பொருத்திக்கொண்டு ஆண்களைப் போலவே வாழ்கிறார்கள். காரணம், அவர்கள் பெண்கள் என்று கண்டுபிடிக்கப்பட்டால் ஆண் பெரும்பான்மை சமுதாயத்தில் அவர்களைப் பங்கு போட்டு ஒரு மாற்றில் உண்டு இல்லை என்று பண்ணி உயிர் நீக்கிவிடுவார்கள். அதனால் அவர்கள் அடையாளங்களை மிகத் திறமையாக மறைத்து வாழ்கிறார்கள். (சுஜாதா, 2008, ப. 156)

என்று பெண்கள் தங்கள் அடையாளத்தை மறைத்து வாழுகின்ற நிலை ஏற்படும் என்று இக்கதை சுட்டுகிறது.

பெண்களுக்கான எதிர்கால அச்சுறுத்தல்கள்

பெண்ணுரிமை, பெண்விடுதலை, பெண்கள் போராட்டம் எனப் பேசப்படும் இந்நாளின் மாற்றம், இவற்றின் காரணமாக எதிர்வரும் காலங்களில் வெற்றியடையும் என்பதே அறிவியல் புனைகதைப் படைப்பாளரின் கருத்தாக அமைகிறது. கல்வி, வேலை வாய்ப்பு, உயர்பதவி என அனைத்திலும் ஆணுக்கு நிகராகப் பெண்கள் படைக்கப்பட்டுள்ளனர். பெண்ணின் விருப்பிற்றி ஓர் ஆண்மகன் அவளை நெருங்க முடியாது. "பெண்கள் அனுமதியின்றி தொட்டால் இந்த நாட்டில் என்ன தண்டனை தெரியுமா? பெண்கள் வெறும் போகப்பொருட்களோ நுகர்பொருட்களோ இல்லை என்று ஜீவாவின் கையேடு குறிப்பிடுகின்றதே! என்ன தைரியத்தில் என்னைத் தொடுகிறீர்கள்" என்று பெண்கள் துணிவுடன் எதிர்க்கும் நிலையை 'என் இனிய இயந்திரா' புதினம் குறிப்பிடுகிறது.

‘மானிட்டர் திரையில் அதிகாரியின் முகம் தெரிய, என்ன வேண்டும் பெண்ணே,’ என்று சிரித்தார்.

‘என் பெயர் நித்யா, என்னை வீட்டுக்கு அழைத்துச் செல்ல யாராவது ஒரு பெண்ணை அனுப்ப வேண்டும். என் விருப்பம் இல்லாமல் ஒருவன் என்னைத் தாயாக்க முயற்சி செய்கிறான்.’

‘அப்படியா? மிகப்பெரிய குற்றம்! உடனே அனுப்புகிறோம். புதினைந்து செகண்டுகளில், எங்கே இருக்கிறாய்...?’ (சுஜாதா (2009), ப.28)

எனும் பகுதியும் இதனை வலியுறுத்தும்.

இன்று பெண்கள் பாலியல் வன்கொடுமைக்கு ஆளாவது போல் எதிர்காலத்திலும் பெண்கள் பாலியல் துன்புறுத்துதலுக்கு ஆளாவார்கள் என்று அறிவியல் புனைகதைகள் எச்சரிக்கின்றன. ‘என் இனிய இயந்திராவில்’, சிபியின் மனைவி நிலாவுடன் ரவி தன் பாலியல் தேவையை நிறைவேற்றிக் கொள்கிறான்.

ரவி! தயவு செய்து என்னை விட்டுவிடு. புண்ணியம் உண்டு. நான் மிகுந்த குழப்பத்தில் இருக்கிறேன். இதெல்லாம் வேண்டாம்... வேண்டாம்...

பேசாதே கவனி என்றான் ரவி.

ரவியின் அத்தனை பளுவும் அவள் மீது மிதிக்க முச்சுத் திணறியது.

விருப்பமா, இல்லையா? விருப்பம் விருப்பம்... வேண்டும்.. வேண்டும்..!

(சுஜாதா (2009), ப.64)

என்று குறிப்பிடப்படுகிறது.

தொகுப்புரை

பண்டைக்காலம் தொட்டு இன்றுவரை பெண் என்பவள் ஆண்களின் போகப்பொருளாகவும், ஆண்களால் பாலியல் வன்கொடுமைகளுக்கு உட்பட்டும் இருந்திருக்கிறாள். தான் வாழும் சமூகத்திலும் இல்லற வாழ்க்கை மேற்கொள்ளும் குடும்ப அமைப்பிலும் பல்வேறு நிலைகளில் ஒருக்குமுறைகளைப் பெண் சந்தித்து வருகிறாள். அறிவியல் தொழில்நுட்பங்களின் வளர்ச்சியைப் புனைவுத்தன்மையோடு கூட்டும் அறிவியல் புனைகதைகள் பெண்கள் மீதான ஒருக்குமுறைகள் எதிர்காலத்திலும் தொடர்வதற்கு வாய்ப்புள்ளது என்பதையும் அதற்கு ஆண்களின் சிந்தனையில் திணிக்கப்பட்டுள்ள பெண்ணடிமைச்சிந்தனைகளே காரணம் என்பதையும் அறிவியல் புனைகதைகள் உணர்த்துகின்றன.

துணைநின்ற நூல்கள்

1. அந்தனி ஸ்டோர், மணி, சி. (மொ. பொ.), ஃப்ராய்ட், அடையாளம் வெளியீடு, புத்தாந்தம், முதற்பதிப்பு, 2005.
2. ஆர்னிகா நாசர், அறிவியல் சிறுகதைகள் தொகுதி-1, ராமையா பதிப்பகம், சென்னை-14, முதல் பதிப்பு, 2001.
3. ஆர்னிகா நாசர், அறிவியல் சிறுகதைகள் தொகுதி-2 ராமையா பதிப்பகம், சென்னை-14, முதல் பதிப்பு, 2001.
4. சுரேஷ், எம்.ஜி. 37, புதுப்புனல், சென்னை, முதற்பதிப்பு, 2003.
5. சுஜாதா, என் இனிய இயந்திரா, விசா பப்ளிகேஷன்ஸ், சென்னை-17, ஏழாம் பதிப்பு, 2009.
6. ராஜ் கௌதமன், பாட்டும் தொகையும், தமிழினி, சென்னை, முதற்பதிப்பு, 2006.
7. சுஜாதா, விஞ்ஞான சிறுகதைகள், விசா பப்ளிகேஷன்ஸ், சென்னை-17, ஏழாம் பதிப்பு, 2008.

