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कर्म:Society

Kedar Amar Research and Academic Management Society

Kedar Amar Research and Academic Management Society known for it's acronym KARAM Society has been established in the year 2009 keeping in dream the empowerment and comprehensive expansion needs of society. The society has been established as a "Not for Profit" Company under the societies registration act, 1860 with a Registration no. S/65067/2009. In the present state -of-affairs, the KARAM Society engaged in the advancement of medical knowledge and provision of assistance to medical students and professionals.

The mandate behind KARAMS is to make certain transparency, accountability and adherence to corporate governance norms. Recently KARAM Society had put it's ware bouts in an online publishing and collaborated with Open Journal Inc. and Publishes two hard core empirical research journal on information systems (www.gjeis.org) and in medical science (www.agems.in). Both the Research journals are now available in a Brick-&-Mortar mode also with an ISSN and eISSN Numbers respectively. The rationale of the KARAM Society is to promote empowerment and inclusive development with an emphasis on social, digital and financial inclusion; strengthening of delivery systems and participatory democracy for bringing about a systemic change to help meet development objectives better. During the past two decades founder members of KARAM Society have travelled transversely the country to learn critique and encourage social, digital, medical and financial inclusion. In the process, knowledge repositories have been created on what works—the most excellent practices—actively engaging all stakeholders from policy makers and civil society to ordinary citizens. The KARAM will allocate this knowledge for progression and nation-building all the way through e-learning modules and virtual platform for practitioners and publishing video documentaries on our portals. Recently it had started new portal http://open-journal.com which is backed by the gamut of great academician from different part of the world.

In the last few years KARAM Society conducted numerous health camps in a charitable mode in a various districts of Haryan, Rajasthan, Uttarpradesh, New Delhi, etc. which are organized with support from corporate, civic bodies, the government, NGOs and individual volunteers. KARAMS has conducted over 75 general health camps till date and has benefitted more than 25, 000 people directly. In line with the policy to provide healthcare services to the community around our facilities, KARAM Society has started a Mobile Medical launched Mobile Medicare Unit (MMU hereafter) to address the health concerns of older persons living in urban slums. Technical aids are provided to the poor elderly that could improve their quality of life and make them independent. Eye camps are organized every year now and then to screen beneficiaries for cataract. Awareness about diseases and healthy living is an important component and constant effort by KARAM Society is being made in this direction. The team of KARAM SOCIETY India consists of a medical doctor, a community health mobilizer, a pharmacist and a social protection officer. The team will not only provide curative medical services but will also raise public awareness on preventive and promotive aspects through awareness generation and multi-disciplinary medical camps, etc.

KARAM Society best practices have been documented as information cards, video case studies, policy and white papers that are consistently shared with group of people at great, so that it can become a wider learning process. Having done all the above driven by individual enthusiasm and excitement, the members now felt the need to create an institutional framework that not only takes this work forward and emerges as a key expansion institution but also helps in facilitating implementation mechanisms such that the benefits of wide-ranging development are actually received by society.

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Message from Editor Desk

EIS feeds more data into the machine learning and strengthening the processes intelligence

Dear GJEISians,

"Million dollar" is a very popular jargon as used as a frequent terminology vis-à-vis to any saying/quoting, but in a present scenario it is well replaced with a new verbiage "billion dollar" as numerically million had no standing in a place of billion, due to enhancement in new upcoming self-made burgeoning billionaires advent with their start-ups and innovative thoughts.

On this line the question which I had deliberately formulated is very much omnipresent "Why Microsoft bought LinkedIn for $26 billion". The thought behind was that synergy categorically worth $26.1 billion, particularly after Microsoft fundamentally blew $7.2 billion chasing Nokia's handset business? Well, contemplate about this: LinkedIn is primarily the Facebook of the business world, and the digital repository of most of the world's resumes. You may falsehood to your friends roughly whether or not you like journey, but very few people propaganda about their resumes to prospective employers. And that's information that Microsoft is enthusiastic to compensate. With that Merger and Acquisition (M&A) Microsoft knows your calendar (Outlook), your meetings (Outlook), your co-workers (Delve) your accounts (Microsoft Dynamics CRM) and some of your know-how (Delve). Microsoft calls this the Office Grid. Microsoft will expedite the LinkedIn information to empower applications like Delve—which is at present part of Office 365. By making Office 365 a more powerful application, Microsoft sells more Office 365 subscriptions, exactly to enterprises and small businesses—and possibly sells Lynda training subscriptions right together and finally make the two networks, together, essential.

The moral of the story about all these M&A in this message to float the creditworthiness of feeding more data into the machine learning and strengthening business intelligence processes because becoming a billionaire is the dream of almost everybody but not each Tom, Dick, and Harry becomes a billionaire as lot's of wear and tear required to make dream into reality.

The GJEIS as a scholastic Journal facilitates well-groomed business leaders with its research initiatives and rigours blind and peer review process The journal is right now listed in almost fifty directories in the world, equipped with Digital Object Identifier (DOI) from Cross-ref USA http://www.crossref.org . It also had an average impact factor of 1.68 from the various impact factors rating agencies. The journal with its eight volumes focused on this part and emphasize how changes brings a paradigm shift on the plus side and create tremendous market opportunities in products and services. Mandate of a Journal is to popularize the impression of Enterprise, Information and System in business and outside business. It is designed to enlighten people that synchronization of three words is not just a pecuniary objective, but is more ubiquitous, that is why we have to get transversely what the academics and the peers are doing and saying about technological pitch in creating a niche. We have built a comprehensive squad to make GJEIS sincerity.

We had moved to a new portal from mid of 2016 to http://www.informaticsjournals.com/index.php/gjeis/index with an intention to strengthen GJEIS more academically and research oriented. We had also now made the open access just to enhance citation as well as reaching to unreached. Apart from it, the dedicated page in Facebook created in order to touch with the GJEIS Fraternity https://www.facebook.com/GJEiS. The GJEIS Website has been moving to a new contemporary Google-hosted JavaScript service which follow community-curated online directory, helps in indexing and facilitate in providing s access to peer-reviewed articles. It is also equipped with search engine optimization and web analytics for statistical analysis.

Dr. Subodh Kesharwani

Founder, Editor-in-Chief

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Profitability and Liquidity Analysis of Bajaj Auto Ltd. and Hero MotoCorp Ltd.

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Abstract

The research paper focuses on the profitability and liquidity analysis of Hero Moto Corp and Bajaj Auto Ltd. Analysis has been done on the basis of some selected parameters like Liquidity, Profitability, Efficiency, Leverage ratios and Market Value Ratios for the period from 2011 to 2015. The idea of this research paper is to know the short term as well as long term profitability and liquidity position of selected companies and to give suitable suggestions for improvement in their financial position.

Keywords: HMC, BAL, Financial Ratios, Financial Parameters

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1. Introduction

1.1 Hero Moto Corp

Hero Motocorp Ltd. Formerly Hero Honda, is an Indian motorcycle and scooter manufacture based in New Delhi, India. The company is the largest two wheeler manufacture in India. In India, it has a market share of about 46% in 2 wheeler category. A joint venture between the Hero Group and Honda Motor Company was established in 1984 as Hero Honda Motors Limited at Dharuhera, India. Munjal Family and Honda group both owned 26% stake in the company.

In 2010, it was reported that Honda planned to sell its stake in the venture to the Munjal family and finally Hero Honda Motors Ltd split from Honda motors and official announcement was made in august 2011.The new brand identity and logo, Hero MotoCorp, was revealed on 9 August 2011 in London, but Honda will continue to provide technology to Hero Honda motorbikes until 2014 for existing as well as future models.

Hero MotoCorp Ltd. is the world's largest manufacturer of two – wheelers, based in India. Hero Honds has three manufacturing units based at Dharuhera, Gurgaon in Haryana and at Haridwar in Uttarakhand. These plants together are capable of churning out 3.9 million bikes per year. The company's most popular model is the Hero Honda's Splendor, which is the World's largest-selling motorcycle, selling more than one million bikes per year.

In 2001, the company achieved the coveted position of being the largest two-wheeler manufacturing company in India and the 'World No.1' two-wheeler company in terms of unit volume sales in a calendar year by a single company. Hero Honda has retained that coveted position till date. During the fiscal year 2008-09, the company sold 3.7 million bikes, a growth of 12% over last year. In the same year, the company had a market share of 57% in the Indian market.

1.2 Bajaj Auto Ltd

Bajaj Auto Ltd. is an Indian two-wheeler and three-wheeler manufacturing company. Bajaj Auto manufactures and sells motorcycles, scooters and auto rickshaws. Bajaj Auto is the world's sixth- largest manufacturer of motorcycles and the fourth-largest in India. It's the world largest three-wheeler manufacturer.

Bajaj Auto came into existence on November 29, 1945 as M/s Bachraj Trading Corporation Private Limited. It started off by selling imported two- and three-wheelers in India. In 1959, it obtained license from the Government of India to manufacture two- and three-wheelers and it went public in 1960. Bajaj Auto Ltd. is an important Indian automobile manufacturer. Bajaj Auto is the second largest two-wheeler manufacturer in India and one of the largest in the world. It is also the earliest one in India to venture into automobile manufacturing.

Bajaj Auto Ltd. is the largest exporter of two and three wheelers. With Kawasaki Heavy Industries of Japan, Bajaj man-

*Author for correspondence

ufactures state-of-the-art range of two-wheelers. The brand, Pulsar is continually dominating the Indian motorcycle market in the premium segment. Its Discover DTSi is also a successful bike on Indian roads.

1.3 Popular Brands of HMC

CBZ, Karizma, Hunk, Impulse, Glamour, Passion XPRO, Splendor PRO, Achiever, Ambition, CBZ Star and Splendor.

1.4 Popular Brands of BAL

Bajaj Pulsar, Bajaj Discover and Bajaj Platina, Bajaj Ninja and Bajaj Avenger.

2. Review of Literature

Many of the research work have been conducted, over the period to evaluate the financial position of the company with the help of various ratios or by applying the Multiple Discriminate Analysis to predict the corporate failure.

L.C.Gupta (1999) attempted a refinement of Beaver's method with objective of predicting the business failure in, "Financial Ratios as Forewarning Indicators of corporate sickness", Bombay, ICICI), in this he tried to throw light on the business's strength and weakness with the help of ratio analysis, he explained that with the financial ratios a company can take measures to increase its profitability and can avoid company's bad financial position. Business Managers can make a strategy towards company's goal with the help of proper ratio analysis, because ratio analysis can prove a useful technique to present a true picture of any company. Whereas

Mansure. A. Mulla (2002) made a study in Textile mill with the help of Z score model for evaluating the financial wealth with five weighted financial ratios in, "Use of Z score analysis for Evaluation of financial health of Textile Mills-A case Study", Abhigyan, Jan-Mar,Vol XIX, No.-4, pp 37-41, with the help of five weighted financial ratios he tried to show the financial health of textile mills. With the help of Z score analysis he analyzed the financial health of textile mills. With the ratio analysis and Z score technique he tried to evaluate the profitability of textile mills, followed by Selvam[9] and others had revealed about Cement Industry's financial health with special reference to India Cement Limited in his article, with the help of Z score analysis he tried to analyze the financial health of India Cement Ltd, he tried to explain how a company managers can take proper actions with financial ratios.

Bagechi[3] analyzed about practical implication of accounting ratios in risk evaluation and concludes that accounting ratios are still dominant factors in the matter of credit risk evaluation in his paper, where he gave due attention on the importance of accounting ratios in risk evaluation, he explained accounting ratios are the most important tools to avoid any risky situation for a company.

Sanjay[2] made a study in cement industry for the evaluation of financial performance with selected ratios and he tried to evaluate the profitability and efficiency of Indian Cement Industries with the help of ratios related to profitability and efficiency of companies.

Krishna Chaitanya (2005) used two models to measure the financial distress of IDBI and concluded that IDBI is likely to become insolvent in the years to come in, "Measuring Financial Distress of IDBI Using Altman Z-Score Model", The ICFAI Journal of Bank Management, August, Vol.IV, No.3,pp 7-17, in his study he tried to analyze the financial position of IDBI and conclude that company is suffering from bad financial position and can be insolvent in coming future. So to avoid any bad situation he tried to give some suggestions to improve the financial position of the IDBI in the coming future.

Rajesh[5] analyzed the valuation of Indian companies on the basis of some selected indicators on the basis of some selected indicators like sales, cash flows, market capitalization, growth rate, research & development he tried to know the exact financial position of the top selected Indian Companies in the market. Companies from the different sector of our economy like automobiles industry, cement industry, IT industry, Tekcom industry, Fertilizer industry were taken into study.

Natescon & Allimuthus[7] analyzed the performance of Tube Investment of India Ltd. with ratio analysis, with the help of ratio analysis technique he tried to evaluate the financial performance of Tube Investment of India Ltd on the basis of some selected ratios related to the profitability and efficiency of the company.

3. Objectives of the Study

1. To know the Liquidity, Profitability, Efficiency, Leverage and Market Value of Hero MotoCorp Ltd. and Bajaj Auto Ltd.
2. To give suggestions on the basis of Liquidity, Profitability, Efficiency, Leverage and Market Value Analysis.
3. To compare the financial position of the both the sampled units.

3.1 Data Source

Data has been taken from the year 2011 to 2015. It has been collected from the Capitaline, PROWESS Release 4.15 .Various Tools and Techniques like Average, S.D. and COV have been used to arrive at any conclusion.

3.2 Liquidity Analysis

There are two aspects of the financial situation of any business the short term & the long term. Short term financial potion is not only important for banks, creditors but also valuable for the

management in finding out the efficiency with which working capital is being employed in the business. It is also important for shareholders & long term creditors in determining to some extent, at least the prospects of dividend & interest payment.

3.2.1 Financial Performance on the Basis of Liquidity Analysis of the Two Companies (Table 1)

It is evident from the Table 2 that BAL leads in the liquidity analysis as compared to HMC. BAL's liquidity score is 0.69 whereas HMC's liquidity score is 0.27

Current Ratio of HMC during the reference period was lower than the standard norms of 2:1 and in the case of BAL it was also lower in all the years during the study period than the standard norms of 2:1. Low Current Ratio indicates that both the

Table 1. Liquidity ratios of companies (Times)

Year End Quick Ratio	2011	2012	2013	2014	2015	Average	SD	Correlation
Bajaj Auto Ltd.	0.56	0.7	0.66	0.58	0.65	0.63	0.05	0.1535
Hero Motocorp Ltd.	0.05	0.11	0.2	0.27	0.43	0.21	0.13	
Current Ratio								
Bajaj Auto Ltd.	0.67	0.82	0.78	0.69	0.8	0.75	0.06	0.4436
Hero Motocorp Ltd.	0.15	0.3	0.34	0.43	0.64	0.37	0.16	

Source: Computed with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

Figure 1. Quick ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

Figure 2. Current ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015'

companies faced difficulties in handling short term obligations on time.

Liquidity Ratio of HMC during the study period was less than the standard norms of 1:1 and in the case of BAL the liquidity ratio was lower than the standard ratio of 1:1. Like Current Ratio, low Liquidity Ratio also signals that both the companies were not able to meet their short term liabilities.

It can be concluded that both the companies are not in good position to meet their short term obligation on time during the reference period, because in most of the years during the study period ratios are below than the recommended value.

Table 2. Comparison on the basis of mean value of ratios

Sl.no.	Liquidity Analysis	HMC	BAL
1	CR	0.37	0.75
2	LR	0.21	0.63
	Sum of Mean Value	0.58	1.38
	Avg. Score	0.27	0.69
	Ranking	2	1

3.3 Profitability Analysis

The main purpose of business unit is to make profit. The profitability ratios are computed to throw light on the current operating performance and efficiency of the business firm when they are related to some other figures such as sales, cost of goods sold, operating expenses, capital invested etc.

3.3.1 Financial Performance on the Basis of Profitability Analysis (Table 3)

Table 3. Profitability Ratios of Companies (Percentage) (In relation to Sales)

Year End	2011	2012	2013	2014	2015	Average	SD	Correlation
Gross Profit Ratio								
BAL	24.51	20.76	20.92	22.80	19.11	21.62	1.86	-0.2637
HMC	13.17	15.36	14.00	14.40	13.51	14.09	0.76	
Net Profit Ratio								
BAL	17.81	14.22	13.85	14.83	12.18	14.58	1.84	0.4784
HMC	8.97	9.15	8.04	7.61	7.98	8.35	0.60	
Operating Profit Ratio								
BAL	23.18	19.06	19.41	21.17	17.68	20.10	1.90	0.0837
HMC	11.19	11.03	9.6	10.35	11.14	10.66	0.61	

Source: Computed with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

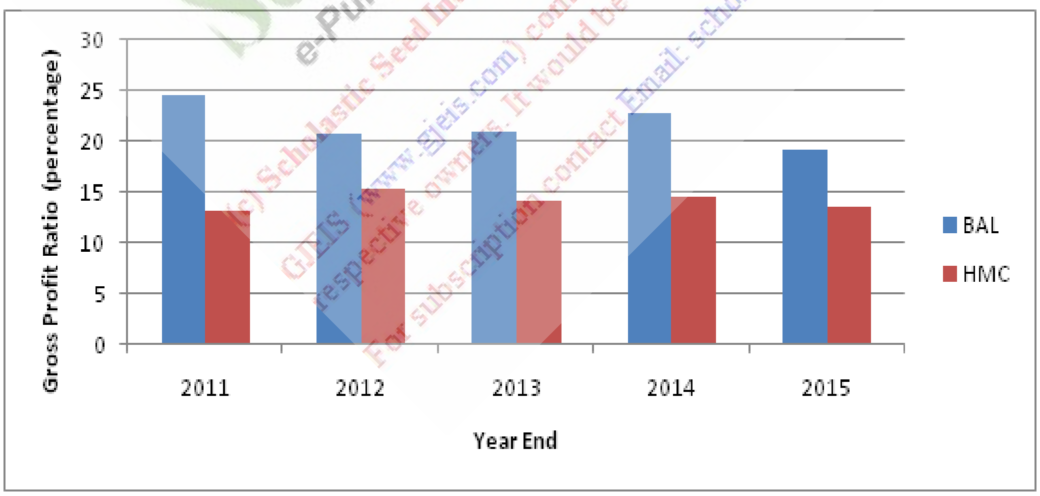

Figure 3. Gross profit ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

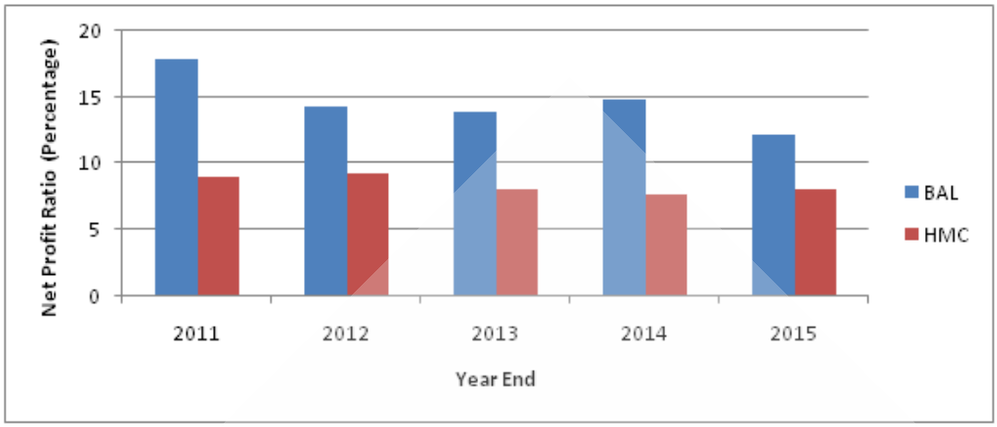

Figure 4. Net profit ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

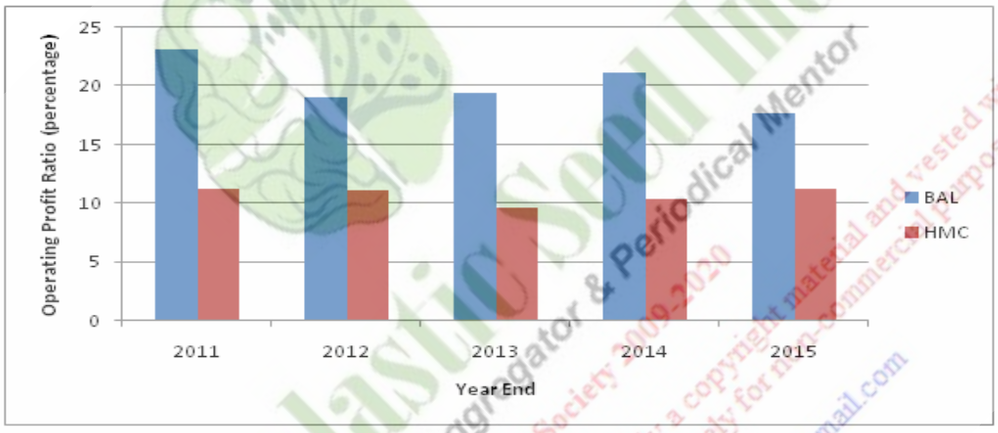

Figure 5. Operating profit ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

Table 4. Comparison on the basis of mean value of ratios

Sl.no.	Profitability Analysis	HMC	BAL
1	GPR	14.09	21.62
2	NPR	8.35	14.58
3	OPR	10.66	20.10
	Sum of Mean Value	33.10	56.30
	Avg. Score	11.03	18.77
	Ranking	2	1

The BAL leads in profitability analysis as compared to HMC's.

Profitability score in relation to sales of BAL was 18.77 whereas HMC's score was 11.03

As per the Table 4 Gross Profit Ratio of HMC was less than the standard norms of 20-30 percent in all the years during the reference period. BAL's gross profit ratio was satisfactory in all the years except in 2015. Low Gross Profit Ratio indicates that the profit was not sufficient to cover the operating expenses of the companies.

Net Profit Ratio of BAL varied in a range of 15 percent from 2011 to 2015, which can be said satisfactory because usually 5 to 10 percent net profit ratio is considered as good for the company. In the case of HMC the profit varied in a range of 8 percent during the study period. High Net Profit Ratio indicates that both the companies didn't face any difficulty in maintaining its reserves and they had sufficient amount to cover the operating and non-operating expenses.

Operating Profit Ratio of BAL varied in a range of 20 percent throughout the period whereas HMC's operating ratio varied in a range of 10 percent, usually operating ratio is considered good between 75-80 percent. In both the companies this ratio was lesser than this standard which means that the both the companies might have faced difficulty in covering its non-operating expenses.

Overall we can conclude that profitability in relation to sales was better of BAL in comparison to HMC.

3.3.2 *Financial Performance on the Basis of Profitability Analysis (Table 5)*

It is evident from the Table 6 that BAL leads in the profitability analysis in relation to investment as compared to HMC. BAL's score of profitability in relation to investment is 47.88 whereas HMC's score is 44.73

Return on Capital Employed of BAL varied in a range of 46.05 during the reference period and ROCE of HMC varied in

Table 5. Profitability Ratios of Companies (Percentage) (In relation to Investment)

Year End	2011	2012	2013	2014	2015	Average	SD	Correlation
ROCE								
BAL	70.27	52.69	43.00	36.79	27.49	46.05	14.63	0.7877
HMC	44.63	42.74	35.45	35.71	38.4	39.39	3.71	
RONW								
BAL	85.21	54.86	43.66	37.10	27.72	49.71	19.83	0.7729
HMC	60.05	65.64	45.57	39.77	39.30	50.07	10.81	

Source: Computed with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

Figure 6. Return on capital employed of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

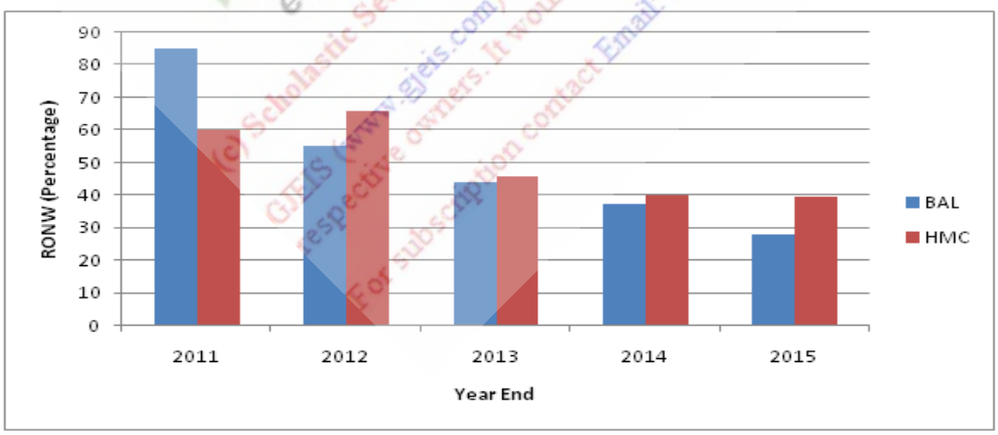

Figure 7. Return on net worth of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

a range of 39.39 .It shows that BAL has used its funds received from owners as well as from long term lenders in a better way in comparison to HMC's ROCE.

Return on Net Worth of BAL varied in a range of 49.71 and of HMC varied in a range of 50.07. RONW indicates that how much profit has been earned by the company and how much is available to the equity shareholders for the distribution of dividend. Higher RONW means more profit for the equity shareholders and low RONW means vice versa..

Overall we can say that profitability in relation to investment was better of BAL than HMC

Table 6. Comparison on the basis of mean value of ratios

Sl.no.	Profitability Analysis	HMC	BAL
1	ROCE	39.39	46.05
2	RONW	50.07	49.71
	Sum of Mean Value	89.46	95.76
	Avg. Score	44.73	47.88
	Ranking	2	1

3.4 Efficiency Analysis

Efficiency analysis shows how assets are being utilized in the company. For this purpose variouratios i.e. FATR, STR, DTR & WCTR can be calculated.

3.4.1 Financial Performance on the Basis of Efficiency Analysis (Table 7)

Table 7. Efficiency ratios of companies (Times)

Year End	2011	2012	2013	2014	2015	Average	SD	Correlation
Fixed Assets Turnover Ratio								
BAL	5.12	6.03	5.85	5.34	5.5	5.57	0.33	-0.4988
HMC	5.02	4.26	3.95	4.00	3.90	4.23	0.42	
Stock Turnover Ratio								
BAL	34.89	33.41	32.14	33.1	30.92	32.89	1.32	0.9248
HMC	43.31	42.04	39.11	41.58	39.46	41.10	1.59	
Debtors Turnover Ratio								
BAL	57.84	52.32	35.5	27.01	29.71	40.48	12.36	0.9834
HMC	174.2	125.27	54.75	34.25	25.37	82.77	57.62	

Source: Computed with the help of Statistics Data taken from the CapitaLine Plus database for the period 2011 to 2015

Figure 8. Fixed assest turnover ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

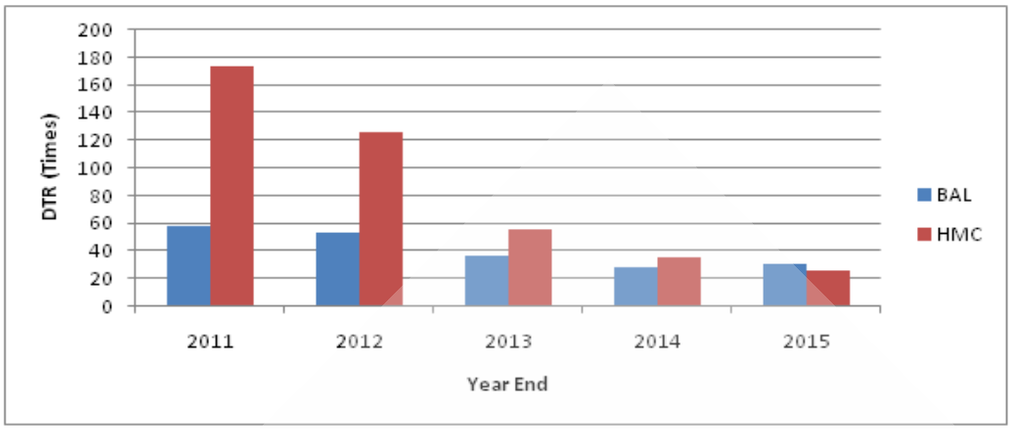

Figure 9. Stock turnover ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

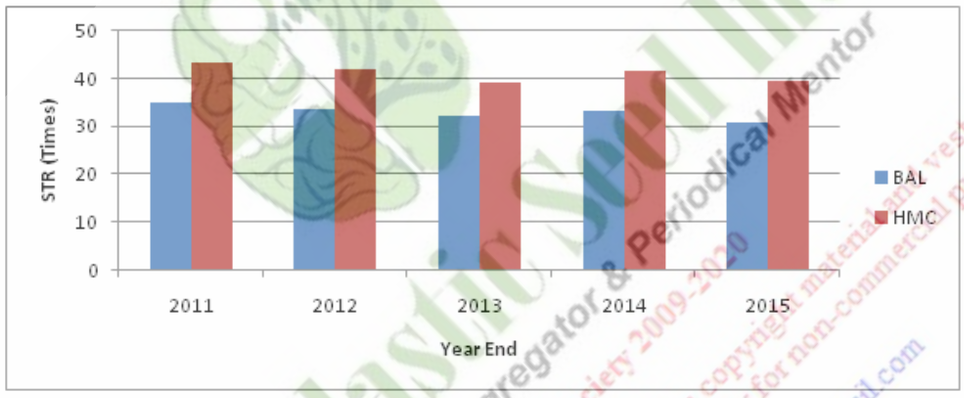

Figure 10. Debtors turnover ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

Table 8. Comparison on the basis of mean value of ratios

Sl.no.	Efficiency Analysis	HMC	BAL
1	FATR	4.23	5.57
2	STR	41.10	32.89
3	DTR	82.77	40.48
	Sum of Mean Value	128.10	78.94
	Avg. Score	42.7	26.313
	Ranking	1	2

It can be observed from the Table 8 that HMC leads in the efficiency analysis as compared to the BAL efficiency analysis.

Fixed Assets Turnover Ratio of HMC varied in a range of 4.23 and of BAL varied in a range of 5.57. Usually a 5-6 times FATR is considered good for any company. In those years where it was less than the standard it shows insufficient utilization of fixed assets in both the companies. Overall it can be concluded that BAL's FATR was better than the FATR of HMC.

Stock Turnover Ratio of HMC varied in a range of 41 and of BAL varied in a range of 33 during the study period. Higher STR shows efficient management of inventory and lower STR indicates inefficient management of inventory, stock accumulation and slow moving of goods. In all the years HMC has proved efficient company in managing its inventory in comparison to BAL. Overall we can say that HMC's STR was better than the STR of BAL.

Debtors Turnover Ratio of HMC varied in a range of 83 and of BAL varied in a range of 40. Higher DTR indicates more efficiency in recovering the debtors and low DTR is a signal of inefficient management of debtors. HMC has proved a better managing company in recovering its debtors in comparison to BAL.

Overall HMC's efficiency analysis can be said satisfactory in comparison to BAL

Leverage Analysis: Leverage analysis means to know the long term solvency position of the company. It means that is company able to pay off its long term creditors or not on time. For this CGR, DER & ICR ratios can be taken to arrive at definite conclusion.

3.4.2 *Financial Performance on the Basis of Leverage Analysis (Table 9)*

It can be observed from the Table 10 that HMC leads in leverage analysis as its score is 106 and BAL's score is 104.

Debt Equity Ratio of BAL varied in a range of 0.02 and of HMC in a range of 0.28 during the study period. In all the years DER was less than the 2:1 in both the companies during the reference period which signals good situation for the company because it means that the company is not dependent on the debt

Table 9. Leverage ratios of companies (Times)

Year End	2011	2012	2013	2014	2015	Average	SD	Correlation
Debt-Equity Ratio								
BAL	0.07	0.02	0.01	0.01	0.01	0.02	0.02	0.9266
HMC	0.73	0.4	0.18	0.05	0.02	0.28	0.26	
Interest Coverage Ratio								
BAL	2060.21	179.72	7632.17	136.02	465.93	2094.81	2857.31	-0.0624
HMC	165.57	136.02	213.86	244.7	301.16	212.26	58.22	

Source: Computed with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

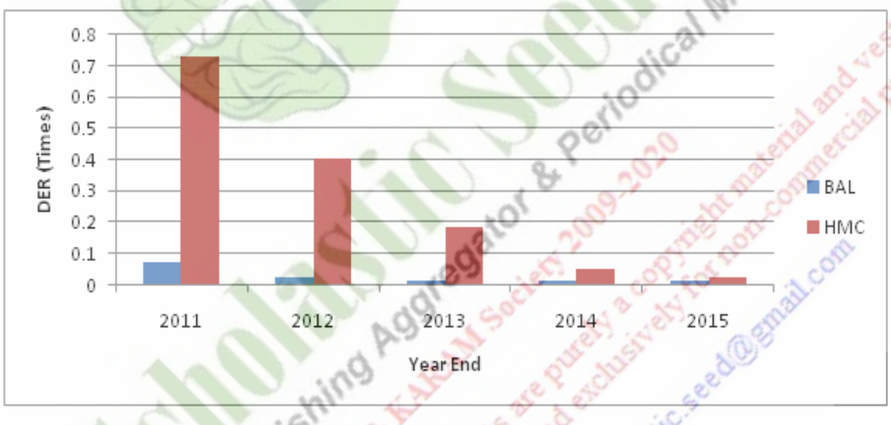

Figure 11. Debtors turnover ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

Figure 12. Interest coverage ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

for its capital requirements. Overall HMC's DER can be said satisfactory in comparison to BAL.

Interest Coverage Ratio of BAL varied in a range of 4012.18 and of HMC varied in a range of 415.54. Higher ICR indicates company's efficiency to pay interest on loans on times, low indicates otherwise. Overall BAL's ICR can be said well in all the years during the study period in comparison to the ICR of HMC.

Overall HMC can be said better company in Leverage Analysis as compared to BAL.

Market Value Analysis: The THREE ratios of EPS, P/ER, BVPS, taken as indicators of market valuation.

Table 10. Comparison on the basis of mean value of ratios

Sl.no.	Leverage Analysis	HMC	BAL
1	DER	0.28	0.02
2	ICR	212.26	2094.81
	Sum of Mean Value	212.54	209.83
	Avg. Score	106.27	104.91
	Ranking	1	2

3.4.3 *Financial Performance on the Basis of Market Value Analysis (Table 11)*

Table 11. Market value ratios of companies

Year End	2011	2012	2013	2014	2015	Average	SD	Correlation
EPS								
BAL	85.43	102.03	100.16	108.04	107.59	100.65	8.20	0.6094
HMC	101.14	119.65	106.37	106.29	120.58	110.81	7.84	
PER								
BAL	17.13	16.45	17.97	19.28	18.74	17.91	1.03	0.6913
HMC	15.71	17.18	14.5	21.4	21.89	18.14	2.99	
BVPS								
BAL	169.69	246.82	287.48	332.04	369.5	281.11	69.34	0.9575
HMC	148.03	236.90	292.14	280.43	327.58	257.02	61.72	

Source: Computed with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

Figure 13. Earnings per share of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

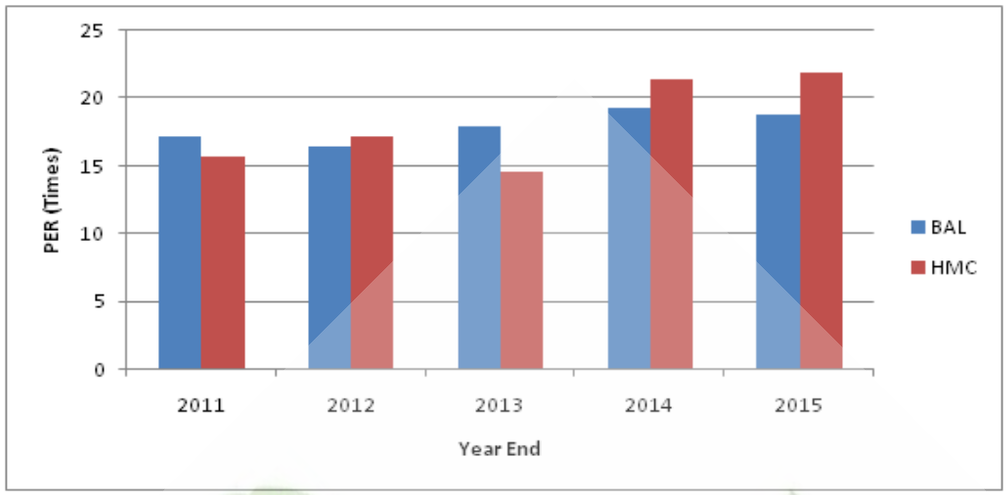

Figure 14. Price earnings ratio of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

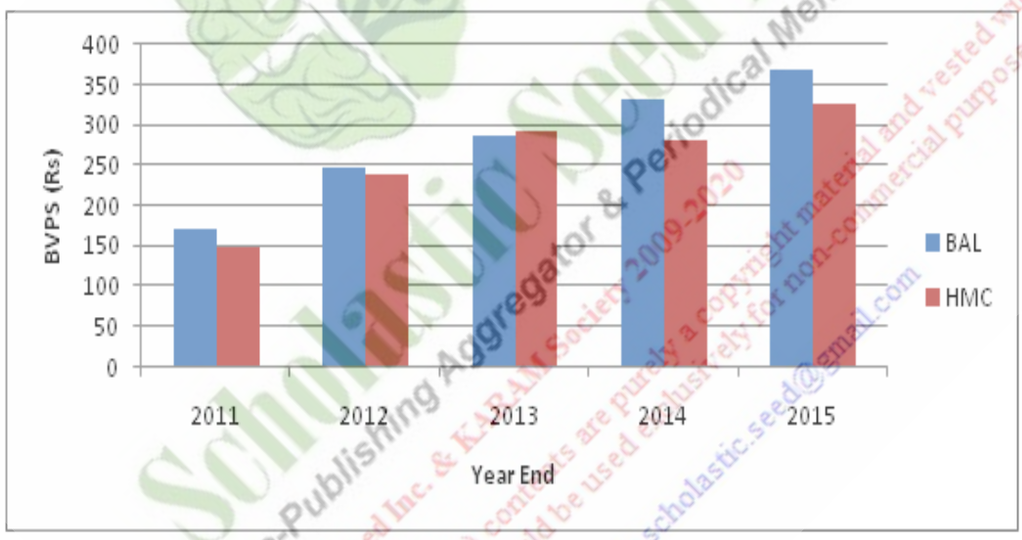

Figure 15. Book value per share of companies.
Source: Drawn with the help of Statistics Data taken from the PROWESS Release 4.15 from CMIE database for the period 2011 to 2015

Table 12. Comparison on the basis of mean value of ratios

Sl.no.	Market Value Analysis	HMC	BAL
1	EPS	110.81	100.81
2	PER	18.14	17.91
3	BVPS	257.02	281.11
	Sum of Mean Value	385.93	399.67
	Avg. Score	128.66	133.22
	Ranking	2	1

It can be evident from the Table 12 BAL leads in the market valuation as compared to HMC.

Earnings per Share of BAL varied in a range of 100.81 and of HMC varied in a range of 110.81 during the study period. EPS indicates the amount available for the distribution of dividend to equity shareholders. Overall in all the years during the reference period except in 2014 EPS of HMC was higher than the EPS of BAL.

Price Earnings Ratio of BAL varied in a range of 17.91 PER signals the market price of the company, it helps in deciding the investors whether to buy or not the shares of a particular com-

Table 13. Points based on Ranking

Particulars	Points	
	HMC	BAL
Liquidity Analysis	1	2
Profitability Analysis (sales)	1	2
Profitability Analysis (investment)	1	2
Efficiency Analysis	2	1
Leverage Analysis	2	1
Market Valuation	1	2
Total Points	8	10

pany. To conclude HMC's PER can be said well in comparison to the PER of BAL.

Book Value per Share of BAL varied in a range of 281 and of HMC.varied in a range of 257. BVPS indicates the net assets available for the distribution of equity shareholders. BAL's BVPS was more than in all the years during the reference period than the HMC's BVPS.

Overall it can be concluded that BAL was better company in market valuation in comparison to HMC.

It is clear from the Table 13 that on the basis of rank got by each company points have been given. If a company has got 1st rank, according to this 2 marks have been given to that company for every analysis and if company has got 2nd rank, only I mark has been given to that company BAL has got 10 points in comparison to the 8 points of HMC so it can be concluded that BAL is satisfactory in most of the analysis.

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A Semi-Supervised Graph-based Algorithm for Word Sense Disambiguation

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Abstract

Word sense disambiguation is an issue of computational linguistics that aims at extracting the most appropriate sense of a word in a given context. Till date, several unsupervised graph-based methods have been devised for achieving word sense disambiguation but the majority of these methods use the notion of using multiple ambiguous words in a text corpus to create a WordNet® graph which enforces the concept of "blind leading the blind". In this paper, a semi-supervised algorithm has been proposed and implemented that takes into consideration a clue-word for creating the desired WordNet® graph. The existing algorithms of word sense disambiguation consider all the graph connectivity measures to be equally significant but this is not the case. In this paper, a comparative study for all these graph connectivity measures is performed to discuss their connectivity aspects and priorities are assigned to them in order to generate an effective word sense disambiguation algorithm. The WordNet® graph is generated using python external libraries NetworkX and Matplotlib. The proposed algorithm's results are tested using SemCor database and it shows considerable improvement over the unsupervised graph-based method suggested by Navigli.

Keywords: Betweenness, Closeness, Degree, PageRank, Semi-Supervised Learning, WordNet®, Word Sense Disambiguation

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1. Introduction

One of the most prominent features of natural languages is the fact that they possess some kind of ambiguity[10]. This ambiguity, if not resolved could lead to a lot of miscommunications. Word sense disambiguation aims to solve this issue by using various learning techniques[11]. It refers to the task of finding the appropriate meaning of a word in the user's context. It is conceptually the same as word sense induction[12]. Various researchers have proposed several techniques to achieve it. The two major categories of learning include supervised and unsupervised learning. Supervised learning relies on the training datasets that are provided to the machine while in unsupervised learning the data is organized into different classes and no input training data set is needed[13]. Another technique which aims at extracting the advantages of both the supervised and unsupervised learning is semi-supervised learning[14]. It basically refers to the use of a large unlabeled dataset along with a given labeled data set so as to create some prediction rules that would give more precise results on the available data.

In general, the graph-based approach is a part of unsupervised learning but in the proposed algorithm, some useful input labels are considered for the priority values assigned to the centrality measures for the nodes of the graph which mark the presence of supervised learning. These values are assigned after performing a comparative study of these centrality measures. Hence, an effective semi-supervised algorithm is developed which can be applied in general to various circumstances which demand the knowledge about the correct and exact meaning of a word in a particular context. The local measures of centrality that this paper considers are Degree, Closeness, Betweenness, and PageRank. The semantic relations that are used for creating the WordNet® graph are hypernyms, hyponyms, meronyms, and holonyms.

2. Related Work

In 2002, S.Banerjee and T. Pedersen had presented an adaptive Lesk algorithm for achieving word sense disambiguation which utilized WordNet® as the sense inventory and tested the results against the data provided in Senseval-2[5]. In 2006, S.Patwardhan *et al.* had suggested the significance of using WordNet® based "context vectors" for determining the extent up to which two concepts are related[9]. In 2009, E. Agirre *et al.* had highlighted

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a way of "personalizing the PageRank method" in order to give more realistic results for word sense disambiguation on the given dataset[8].

In 2009, Navigli had conducted a well-elaborated survey on word sense disambiguation where the various approaches and techniques corresponding to the issue were explained in depth[1]. In 2010, Navigli *et al.* had presented the concept of BabelNet which is considered as a huge multilingual semantic network that combines the notions of WordNet® and Wikipedia[2]. In 2013, J.Wang has suggested the technique of using greedy max-cut for performing semi-supervised learning[7]. In 2014, Kingma *et al.* had suggested the significance of deep generative modeling using semi-supervised learning[6].

In 2015, Jain & Lobiyal had explained the concept of fuzzy Hindi WordNet® which is further used for performing word sense disambiguation using graph-based approach[3]. The major limitation of this algorithm was that it had considered all the semantic relations to be of equal significance. In 2010, Navigli & Lapata had provided a graph based approach for word sense disambiguation using various local and global measures of graph connectivity without considering the relevance of any semantic relation[4]. This paper extracts the advantages of all the relevant semantic relations and provides a semi-supervised WordNet® graph based algorithm for word sense disambiguation.

3. Graph Connectivity Measures

For measuring the significance of each node in a graph, various measures of graph connectivity are used which incorporates the concept of centrality in them[15]. These measures are discussed in detail in Table 1. If a vertex has higher centrality value then it is considered to be more significant than the other. The centrality measures used in our algorithm are for the weighted graphs[16]. These measures are:

3.1 Degree

This measure considers all the direct connections of a vertex. For weighted graphs the degree measure is calculated as the sum of all edge weights that are incident on it as is given by the following equation:

$$M_D = \sum_u w_{uv} \quad (1)$$

Where w_{uv} = weight of edge connecting node u and v
M_D = degree measure

3.2 Closeness

This measure considers the reciprocal of the total shortest distance from a given vertex to all other vertices. For weighted graphs this measure is given by the following equation:

$$M_C = \sum_{k=1\ tot} \frac{1}{w_k} \quad (2)$$

Where w_k= weight of edge connecting a node to k^{th} node
M_C = closeness measure

3.3 Betweenness

This measure is a representation of "how many pairs of nodes would have to go through a particular node in order to reach one another in the minimum number of hops"[17]. Hence, this measure has greater significance in terms of connectivity. For weighted graphs this measure is given by the following equation:

$$M_B = \sum_{s,t \in V; s \neq v \neq t} \frac{d_{st}(v)}{d_{st}} \quad (3)$$

Where $d_{st}(v)$ = weight/distance of edge connecting a node s and t
M_B= Betweenness measure

3.4 PageRank

This connectivity measure is somewhat different from other centrality measures. It is so because it acknowledges the fact that all connections of a node are not equal[18]. Some edges might be more significant than the others. For weighted graphs this measure is calculated using the following equation:

$$M_{PR} = (1-d) + d * \sum_{(V_a,V_b) \in E} \frac{w_{ba}}{\sum_{(V_c,V_b) \in E} w_{bc}} PageRank(V_b) \quad (4)$$

Where w_{bc} = weight of edge connecting node b and a
w_{bc} = weight of edge connecting node b and c
M_{PR} = PageRank measure

In Table 1, the various aspects of the graph connectivity measures are discussed in detail.

Table 1 shows the comparison of various aspects of the Degree, Closeness, Betweenness and PageRank centrality measures. Betweenness and Closeness measures have better connectivity considerations as compared to the degree measure. This is so because degree centrality only considers the direct and immediate connections in a graph. Hence, it cannot broker between groups. On the other hand, PageRank acknowledges the fact that not all connections are equal.

4. Proposed Algorithm

This section discusses the proposed semi supervised graph based algorithm for disambiguating a word in English language.

Table 1. Comparison of various aspects of the measures of graph connectivity

Parameters	Degree	Closeness	Betweenness	PageRank
Basic Concept	A number of edges that terminate in a given vertex.	Defined as the reciprocal of the total shortest distance from a given vertex to all other vertices.	Defines how many pairs of vertices would have to go through a node in order to reach one another in the minimum number of hops.	Assigns relative scores to all vertices in the graph based on the Recursive principle.
What It Does	Gives a simple count of the number of connections a vertex has.	Tends to give high scores to vertices which are near the center of local clusters in an overall larger network.	Start by finding all the shortest paths between any two vertices in the graph and then count the number of these shortest paths that go through each vertex.	Acknowledges the fact that not all connections are equal.
Connectivity Aspects	It is unable to broker between groups.	Vertices which are highly connected to others within their own cluster will have a high closeness centrality.	If a vertex with high Betweenness is deleted from a network, the graph would fall apart into otherwise coherent clusters.	Based on the concept of Markov chain model.
Disadvantages	Only takes into account the immediate ties that a vertex has rather than indirect ties to all others.	Expresses only the average distance from each vertex to every other vertex in the graph.	High-Betweenness vertices often do not have the shortest average path to everyone else but they have the greatest number of shortest paths that necessarily have to go through them.	When a simple calculation is applied hundreds (or billions) of times over the results, it gets a bit complicated.

The algorithm initiates by taking the sample text as an input from the user and selecting the word which needs to be disambiguated. This word will be the target word. This sample text also contains the clue word that will be needed in the coming steps of the algorithm. This clue word will help in generation of a better WordNet® graph. In order to process the data further, text tokenization needs to be performed followed by part of speech tagging (POST). POST is majorly essential because it helps to associate a word with its corresponding "part of speech" and tells the user about how the further processing of this word will take place.

To create the WordNet® graph, assessment of the semantic relations and Synsets of the target word and clue word needs to be done. Hence, the tagged words are analyzed to generate a set of possible candidates for the clue word. A weighted WordNet® graph is drawn for all the clue words by considering the relevance of these semantic relations: Hypernym, Hyponym, Holonym, and Meronym. These relations are considered under the category of "parts of same speech". The graph is drawn using depth first search algorithm up to depth two i.e. we perform depth first search algorithm to include all edges that lead to a path between the target word and clue word using these Synsets and semantic relations up to depth two. Other depths are not feasible and relevant. If the depth is increased up to three then a WordNet® graph with thousands of nodes will be created which is irrelevant for calculations. The graph should ideally be dense but not too dense for calculations. The nodes in the graph should be relevant and less in number. The most feasible word is chosen according to the WordNet® graph so generated.

Once the clue word is selected, consider the WordNet® graph generated with its help to find the various centrality measures i.e. graph connectivity measures. These measures are then analyzed to find the most significant Synsets of the targeted word from the WordNet® graph. In the previous section various aspects of the centrality measures were discussed. On careful examination, the conclusion was drawn that degree centrality is the least important as far as word sense induction is being concerned. This is mainly due to the fact that it only considers the immediate connections of a given node. Also, Betweenness is the most significant measure. Closeness also plays an important role. Applications of PageRank lay midway. Hence, the proposed algorithm gives Betweenness the highest priority, followed by closeness, PageRank, and degree. The priority weight assignment is done as in Table 2. This marks the presence of semi supervised learning as labels are assigned to the concerned values in the form of priority weights.

Table 3 describes the proposed algorithm. All the centrality measures are calculated using equations (1), (2), (3) and (4). Now the significance score S_s is calculated. The Synset with the highest value of significance score will give the disambiguated sense for the target word.

The implementation and results obtained by this algorithm are discussed in detail in the next section.

Table 2. Priority weights of various centrality measures

Centrality Measure	Priority Weight Assigned
MD	1
MPR	2
MC	3
MB	4

5. Implementation and Results

This section demonstrates the execution of the proposed algorithm and discusses its implementation and results on SemCor database. The programming is done in python and the WordNet® graph is created using python external libraries NetworkX and Matplotlib. The text that is used for demonstration is "The employee was hired by the company". The word to be disambiguated is "company" i.e. the target word. Performing part of speech tagging on the sample text yields the following results:

Table 3. Proposed algorithm

Nomenclature :

a) Ambiguous word : X
b) Clue word: Y
c) Closeness measure : MC
d) Betweenness measure: MB
e) Degree measure : MD
f) PageRank measure : MPR
g) Significance score : SS
h) Number of elements in the set of possible clue words: N
i) Priority weight assigned to the centrality measure = w

1) START
2) User input : complete sentence
3) Choose X
4) Tag the words according to their "part of speech"
5) Generate the relevant set of possible clue words
6) If (N > 1)
   i. For each element: Specify Y
   ii. Draw the WordNet® graph as follows:
      a. Insert all the Synsets of X
      b. Extract the hypernyms, hyponyms, meronyms and holonyms for all the Synsets and insert them as nodes in the WordNet® graph
      c. Draw edges from these nodes to Y whenever there exists a path between them
      d. Add edge weights as follows:
         - Hypernyms → 1.0
         - Hyponyms → 0.8
         - Holonyms → 0.6
         - Meronyms → 0.4
   iii. If generated graph is in the form of a disconnected cluster / hugely dense graph:
      Discard Y and consider another candidate element to perform step a. to step d.
7) For the most relevant clue word calculate the following:
   a) MC
   b) MB
   c) MD
   d) MPR
8) Obtain the significant nodes/ Synsets from the calculated centrality values
9) Assign priority values to the centrality measures (Betweenness>Closeness>PageRank>Degree)
10) Calculate SS for each significant node as follows:

$$S_S = \sum_{i=1}^{4} wi * ci$$

11) The highest value (SS) node/Synset corresponds to the most relevant meaning
12) STOP

Tagged words= [('the', 'DT'), ('employee', 'NN'), ('was', 'VBD'), ('hired', 'VBN'), ('by', 'IN'), ('the', 'DT'), ('company', 'NN')]

Where: NN=Noun
DT=Determiner
VBD=Verb (Past Tense)
VBN=Verb (Past Principle)
IN=Subordinating conjunction or preposition

The set of possible clue words contain "employee" and "hired". A WordNet® graph is generated for both these clue words as shown in Figure 1 and 2. It can be seen that the WordNet® graph using "hired" as the clue word is not feasible for performing the required calculations as it is too dense. Hence, "employee" is used as the clue word to calculate the relevant measures of centrality.

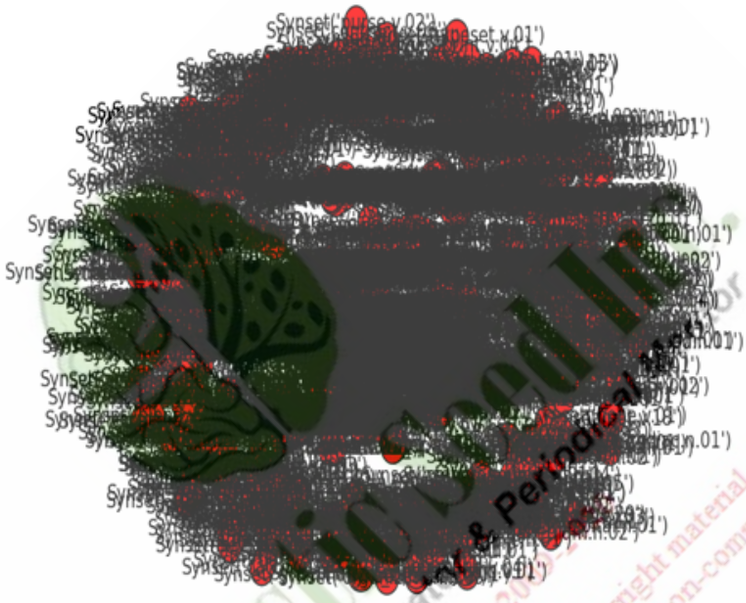

Figure 1. WordNet® graph considering "hired" as the clue word.

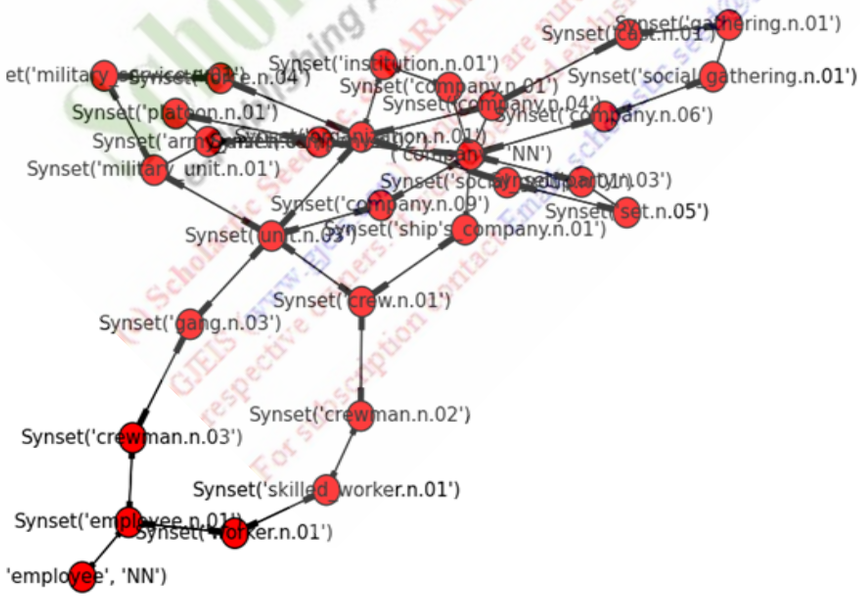

Figure 2. WordNet® graph considering "employee" as the clue word.

The results for all centrality measures for the WordNet® graph in Figure 2 are calculated and tabulated in Table 3. It can be analyzed from this table that the most significant nodes of the graph are "Company.n.02", "Company.n.04" and "Company.n.09" (marked in bold).

Table 3. Measures of centrality for the sample text

Nodes	M_D	M_C	M_B	M_{PR}
Worker.n.01	0.1429	0.2767	0.0198	0.0297
Crewman.n.03	0.1429	0.3743	0.1367	0.0289
Social_group.n.01	0.1429	0.3618	0.0397	0.0304
Force.n.04	0.1429	0.3938	0.0225	0.0286
Army_unit.n.01	0.2143	0.3733	0.0516	0.0385
Employee, NN	0.0714	0.2339	0.0	0.0224
Company.n.04	**0.2143**	**0.4451**	**0.1559**	**0.0347**
Employee.n.01	0.2143	0.3020	0.0970	0.0526
Organization.n.01	0.3571	0.4938	0.2958	0.0605
Crewman.n.02	0.1429	0.4000	0.1067	0.0289
Gang.n.03	0.1429	0.4288	0.1883	0.0234
Crew.n.01	0.2143	0.4628	0.1861	0.0305
Institution.n.01	0.1429	0.3972	0.0265	0.0241
Skilled_worker.n.01	0.1429	0.3185	0.0551	0.0335
Set.n.05	0.1429	0.3211	0.0123	0.0279
Company.n.01	0.1429	0.3753	0.0185	0.0278
Company, NN	0.5000	0.4930	0.3135	0.1022
Party.n.03	0.1429	0.3526	0.0388	0.0279
Company.n.09	**0.1429**	**0.4575**	**0.0727**	**0.0270**
Company.n.02	**0.2143**	**0.3794**	**0.0648**	**0.0353**
Military_service.n.01	0.2143	0.3840	0.0106	0.0260
Unit.n.03	0.3571	0.5385	0.4325	0.0588
Ship's_company.n.01	0.1429	0.4416	0.0791	0.0252
Company.n.06	0.1429	0.3500	0.0542	0.0285
Social_gathering.n.01	0.1429	0.2963	0.0040	0.0294
Cast.n.01	0.1429	0.3763	0.0780	0.0261
Platoon.n.01	0.1429	0.3382	0.0000	0.0219
Gathering.n.01	0.1429	0.2944	0.0159	0.0335
Military_unit.n.01	0.2143	0.4348	0.1243	0.0353

Now the priority weights are assigned to these measures of centrality as previously described in Table 2. The significance score (S_S) is then calculated as shown in Table 4. For the sake of simplicity, rounding off of the values up to two places of decimal is done.

From Table 4 it can be concluded that "Company.n.04" was the most significant node of the graph as it has the highest Significance Score (S_S) and hence it gives the most appropriate disambiguated sense for our target word. For obtaining the experimental results, the SemCor corpus is incorporated which is widely used for performing word sense disambiguation. Table 5 illustrates the results on SemCor database for all words and polysemous words in WordNet®. It shows that Betweenness outperforms the other measures of centrality for performing semi-supervised graph based word sense disambiguation.

The results obtained by using the proposed semi supervised algorithm are better than Navigli's unsupervised method which utilized various graph connectivity measures treating all of them to be equally relevant[4].

6. Conclusion and Future Scope

This paper presented a semi-supervised algorithm for word sense disambiguation algorithm. Semi-supervised learning provides two-sided advantages by exploiting the benefits of supervised and unsupervised learning. It also provides a way to select the most appropriate clue word in a given query that helps to initiate the disambiguation process. A weighted graph based approach for finding the intended meaning of a word in a particular context is used by using a priority based centrality measure calculation method that exploits the significance of various semantic relations. The results obtained for this algorithm are based on the

Table 4. Significance Score for various significant nodes

Node Details	M_D	M_C	M_B	M_{PR}	S_S
Company.n.02	0.21	0.38	0.06	0.04	1.67
Company.n.04	0.21	0.45	0.16	0.03	2.26
Company.n.09	0.14	0.46	0.07	0.03	1.86

Table 5. SemCor results

Measure	Navigli's method (All words)	Proposed method (All words)	Navigli's method (Polysemous words)	Proposed method (Polysemous words)
Degree	50.01	45.76	37.80	37.22
PageRank	49.76	49.88	37.49	37.55
Closeness	47.89	48.67	35.16	38.29
Betweenness	48.72	50.05	36.20	39.98

experiment on SemCor which shows that betweenness gave the best results, followed by closeness, PageRank, and degree. The results are better than the method proposed by Navigli which utilized unsupervised approach for word sense disambiguation. In future, this algorithm can further be extended by considering other semantic relations. Also, it may be extended to languages other than English.

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Challenges of Trade Union Movement in India

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Abstract

The trade union movement in India is facing many challenges. The finances of the unions are generally in a bad shape. Multiplicity of unions and inter-union rivalry makes it difficult to take a constructive approach to problems and issues. Heterogeneity of membership renders the unions unstable, weak, fragmented, uncoordinated and amorphous. Besides this, majority of unions are managed by professional politicians and lawyers who have no experience of physical work and no commitment to the organization. These outside leaders may give precedence to their personal interests and prejudices than welfare of the workers. Development of internal leadership is also not encouraged by unscrupulous politicians in the garb of union leaders.

Keeping in mind all these challenges various scholars and practitioners have suggested certain measures to strengthen trade union movement in India. Developing internal leadership, presenting a united labor front for bargaining, ensuring financial stability of unions, having paid full time union office bearers, extending the boundaries of trade unions to unorganized sector and ensuring strong central legislation for recognition of representative union are some of the measures that can change the face of trade unionism in India.

Keywords: Trade Union Movement, Internal Challenges, External Challenges, Outside Leadership, Measures

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1. Introduction

The year 2001 was a year of centenary celebration for the Indian Trade Union Movement (ITUM). During these celebrations various leaders glorified their contribution to improving the lot of working class in India. They claimed various achievements on economic, social and political fronts. As per their claims economically they had secured a large number of benefits for workers in the organized sector. Politically they had produced a mighty secular, equalitarian, anti-capitalist, anti-imperialist and socialistic force of national economy. Socially they had become a unique force of national integration as their members belonged to various communities, castes, regions, languages and religious faiths.

However, the reality on the ground says a different story. Even if India has the credit of having the largest number of trade unions, their development has been very slow and unimpressive. Till present only 28% of the workers are a part of the trade unions. Actually the existing number has also started dwindling, gradually reducing the size of the unions. The trade union leadership is facing several dilemmas. The finances of the unions are generally in a bad shape. Multiplicity of unions and inter-union rivalry makes it difficult to take a constructive approach to problems and issues. And above all, heterogeneity of membership renders the unions unstable, weak, fragmented, uncoordinated and amorphous.

Various challenges responsible for ever increasing woes and depreciated status of unions will be discussed in this paper. We will also study different measures for revitalizing the position of trade unions.

Let us first understand various internal challenges that trade unions face today

1.1 Internal Challenges

1.1.1 Challenges Related to Leadership

Leadership is considered to be the lynch-pin of the management of trade unions. Union-management relations are largely influenced by the nature of union leadership. Unfortunately in India, majority of unions are managed by professional politicians and lawyers who have no experience of physical work and no association with the corresponding union. It is not leadership by the workers, but leadership by intellectuals.

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The emergence of outside leadership in trade unions can be attributed to some factors. For example most of the union members are illiterate and ignorant, hence incapable of taking up the leadership of the union. Many of the members have a poor command over language; as such they cannot communicate effectively with the management. Similarly, lack of leadership qualities among workers, their low level of knowledge about labor legislation, fear of victimization of employee office- bearers of the union, lack of sufficient financial resources to appoint and support whole time office bearers and unions' lack of formal power also contribute to the emergence of outside leadership. One of the very significant factors is that the Trade Union Act (1926) has itself provided a scope for outside leadership. According to Section 22 of this Act, ordinarily not less than half of the office bearers of the registered union shall be actively engaged and employed in an industry to which the union relates. That means 50% of the office bearers can be outsiders.

The National Commission on Labor (NCL) 1969, reviewed the issue of retaining outside leadership. The Commission referred to freedom of association and right to organize and also upheld the right of the workers' organizations to elect their representatives in full freedom. The NCL indicated that outside leadership weakens the authority of the union and undermines its purpose. It may also give precedence to its personal interests and prejudices than welfare of the union. Other problems that can arise from outside leadership are that it may slow down the growth of trade unions and hamper the growth of internal leadership. Most importantly, an outside leader may fail to understand the problems of workers as he/she does not lead the life of a worker.

It could be beneficial to have an outside leader in the initial stages but it is certainly undesirable in the long run due to the above mentioned evil effects. Most of the trade union leaders seem to fulfill their personal aspirations with the experience gained through their association with the trade unions.

The NCL 1969 recommended that outside leaders should be gradually made redundant and replaced by the internal leaders. Both the management and the trade unions can take following steps to effect this change:

- Even if the trade union leaders are insiders the management should refrain from victimization of leaders.
- The management should provide training facilities to workers in the areas of leadership skills and management techniques.
- Office bearers should be sanctioned special leave to carry out their leadership responsibilities.

All these steps will gradually reduce the interference of outsiders in the union-management affairs and enhance the chances of mutually agreed upon settlements

1.1.2 Multiplicity of Trade Unions

The situation of multiplicity of unions is set to prevail when many unions in the same industry or plant compete with each other for enrolling more members and getting recognition from the management. These unions start functioning with overlapping jurisdiction.

One of the most important reasons for emergence of multiple trade unions is that most of the trade unions in India are linked to political parties. The existence of a large number of political parties in India has thus resulted in a large number of trade unions. Splitting of political parties also leads to split in trade unions, further enhancing their number. Another important factor is the provision of the Indian trade union Act itself. As per this Act, any seven workers in the organization can form a union. So a little misunderstanding among union members, an ego clash or instigation by political parties can lead to a split and result in formation of a new union. Moreover, no conditions have been stipulated in the central law for recognition of unions. Hence each union tries to influence the management for recognition. Outside leaders and political parties could provide direct or indirect support for establishing and getting recognition for a particular union.

The existence of multiple trade unions in any organization or plant poses a serious threat to the unity and strength of workers. Since each union competes with the other to attract more members and secure management support for its recognition this competition could become unfair resulting in inter union rivalry and weakened trade union movement. Weakening of TU movement takes place because multiplicity of trade unions obstructs the possibility of unions joining hands and making a common charter of demands or chalking out a common action plan thus weakening the bargaining power of the union.

Some more problems associated with multiplicity of unions are that unions affiliated to political parties are more committed to party ideology than their industrial unit and its objectives. It often becomes difficult to settle disputes because the approach of different unions to the problem and their method of settlement vary. If the settlement does not suit the 'outside political bosses' of the union the problem may become even more complicated.

Multiple trade unions also weaken the financial status of each union because the number of members in each union becomes less.

1.1.3 Inter Union Rivalry

The existence of multiple unions in the same establishment may lead to rivalry among unions. These unions try to play down one another to gain greater influence among workers.

Inter-union rivalry often results from factors like domination of unions by outside leaders, the desire of various political

parties to make their bases among workers, the self-interest of the employers – to divide and rule the workers, factional politics of local union leaders, and the weak legal framework regulating trade unions.

Existence of inter-union rivalry in the organization weakens the strength of collective bargaining and slows down the growth of trade union movement in the country. Unions may obstruct the normal functioning of other unions so that they can prove them to be inefficient.

The unions may try to malign the reputation of the rival unions. They may criticize even the right actions of the rival unions and try to color these actions as anti- worker or anti -national. These wild accusations can shake workers' faith in the trade unions.

Employers also get an opportunity to use and play unions against one another. Employers may refuse to bargain with the unions on the contention that none truly represents the workers

The existence of a single strong and united union, on the other hand, can protect the interests of the workers more effectively and force leaders and employers to focus on strategic issues. Such a union can promote congenial industrial relations by facilitating expeditious settlement of disputes

The NCL (1969) made some recommendations to reduce inter union rivalry; such as elimination of party politics and outside leadership by developing and building up internal leaders, promotion of strong collective bargaining by making provision for recognition of sole bargaining agents, encouraging union security, improving the system of union recognition, and empowering the labor courts to resolve inter union disputes if the organization fails to resolve these.

1.1.4 Small Size of Unions

Barring a few unions operating at regional or national level most of the unions are characterized by small size. Comparing the size of Indian unions with those in UK and USA we find an average of 800 members per union in India while in UK and USA it is 17600 and 9500 members per union respectively. In India itself we have witnessed declining membership per union. The average number of workers per union was reportedly 3594 in 1927-28 which reduced to about 1552 in 1944-45 and to 877 in 1950-51. A very slight increase was noted in 1998 when the average number of workers per union was reported to be 979. More than 75% of the trade unions which have submitted returns have less than 500 members. The trade unions not submitting returns could have an even lesser membership.

Though the number of unions has been increasing in India, it was not accompanied by an increase in membership. Rather the trend suggests a decline in membership.

An important reason for the emergence of small unions in India can be attributed to the provisions of Indian trade union Act 1926, provides for establishment of a union with a small number of seven members. So whenever workers in any factory or mine are organized, a new union can come into being. Rivalry among the central organizations and the local union leaders further results in fragmentation of unions. If there is intra- union rivalry, the union members may get divided leading to small sized unions

A small size can lead to many problems for the unions. Due to paucity of funds unions find it difficult to engage the services of experts to advise and help union members in the time of need. Fragmented unions find it difficult to get united for collective bargaining. Political parties exploit their helplessness as unions become dependent on these parties for exerting influence on employers and the government agencies. Even the employers can exploit the smaller unions because they might lack bargaining power.

1.1.5 Financial Weakness

To function effectively trade unions require sufficient financial resources. A variety of programs, events and functions have to be organized by the unions for rendering the services expected of them or for fulfilling their goals. Unions have to strengthen their financial position to organize such events and programs

But unfortunately trade unions in India are generally plagued by financial crunch. The primary source of finances for the unions is the membership subscription. The union's items of expenditure include salaries to office staff, allowances to office bearers, annual meeting/convention expenses, rents, printing, stationary and postage etc. Trade unions have to struggle hard to balance their income and expenditure.

Low rate of membership fee is the main reason for unsound financial position of unions. Owing to multiplicity of unions each union vies for enhancing its membership so they usually keep their subscription rate very low. Workers also often feel that unions are not doing enough for them so they don't deserve higher fee. It has also been observed that union members prefer making ad hoc payments if a dispute arises than making regular payment. This shows lack of workers' commitment to the unions.

National commission of labor made the following suggestions to strengthen the financial position of unions:

- Raising the membership fee of union members. The government, however, did not accept this recommendation.
- Introduction of 'check off system' under which an employer, based on collective agreement, undertakes to deduct union dues from the workers' pay and then transfer the deducted amount to the union. The NCL suggested that the recognized union should have the right to demand check off facility. If they make such demands, management should accept it. This

recommendation, however, did not get support from workers, unions or the law.

1.1.6 Uneven Growth of the Unions

Trade unionism is more or less restricted to major metros in India and that too in large scale units like automobiles, textiles, plantations, food industries, coal mines, chemicals, transport and communication, commerce and utility services etc. These are the main organized industries where unionism seems to have made progress, failing to influence other smaller industries.

In large scale industries also, the degree of unionization seems to vary widely from industry to industry. Some industries with a high rate of unionism are tobacco manufacturing (75%); iron and steel (63%); coal (61%); cotton textile (56%); banks (51%); mining (51%); railways (33%); insurance (33%) and plantation (28%). It varies from 30 to 37 percent in communication and transport; electricity and gas; and manufacturing industry etc.

An important reason for uneven growth of unions is the concentration of certain industries in some areas. For example textile workers are concentrated in Ahmedabad, Bombay, Kanpur and Indore; Plantation workers are more in Assam, Tamil Nadu, Bengal and Kerala; jute mill workers are more in Bengal; workers engaged in pharmaceutical and chemical industries are concentrated in Vadodara and Bombay. Understandably, the number of unions will be more in areas where a large number of workers are concentrated.

It has been reported that number of unions in rural areas is almost negligible. The lack of organized labor in the rural sector can be attributed to their sparse and scattered habitation, lack of 'in-group' feeling and also their neglect by union leaders.

1.1.7 Politicization

Historically, the growth of trade unionism in India has been inseparably intermingled with freedom struggle, giving it a political base. Initially it helped the trade union movement to record a rapid growth as well as gain considerable influence with the incumbent government. But gradually the political affiliation of unions started corroding the unity of workers.

Politicization of unions has mostly led to the exploitation of workers strength and unity by political parties for achieving their political objectives. These political leaders have no commitment to the organization. Another negative effect of politicization is the fragmentation of unions and emergence of multiple trade unions because of the split in parent political parties. For example, split of communist party of India into CPM and CPI led to the split of union members owing allegiance to the two factions leading to the emergence of two trade unions. Similarly, inter union rivalry and disunity resulting from politicization reduces the bargaining power of the unions.

1.1.8 Undemocratic Leadership

Trade unions should stand for workers rights. Their basic objective should be to promote industrial democracy. But in practice union leadership rarely encourages participation, transparency and openness. Workers are rarely involved in decision making. Office bearers are quite often nominated than elected. The outside undemocratic leadership reduces the effectiveness of the unions and hinders the emergence of internal leadership.

1.1.9 Workers' Illiteracy and Ignorance

The labor class in India is mostly illiterate, poor and ignorant. They can be easily exploited by unscrupulous union leaders. Workers are also divided on caste, creed, ethnic and religious basis which again goes against the trade union objectives of unity and identity.

1.1.10 Apathy of Workers

Workers are often caught up in the race of earning their living and have no time, energy or interest in getting involved in union activities. Even those who take membership of the union show very little enthusiasm for participating in the union work.

Workers may also sometimes lose interest in the union activities if they get disillusioned with union leadership or when their grievances are not addressed. The apathy of workers can gradually corrode the very basis of unionism.

1.1.11 Lack of Statutory Support

Unfortunately there is no potent central legislation in India to strengthen the position of trade unions. The Indian Trade Union Act, 1926, makes provision for any seven workers to join together and form a trade union. This can result in multiplicity of trade unions which defeats the very concept of unity of workers. This Act further provide for 50% office bearers and 10% leadership from outside the organization. This has led to politicization of unions and outside interference in union activities.

There is no central legislation to make it mandatory for management to recognize one or more unions. 'Code of discipline', at best, recommends voluntary recognition of trade unions.

1.2 External Challenges

1.2.1 Global Competition

Cut throat competition resulting from globalization of business is leading to massive workforce reduction. Companies are cutting on workers to one-fourth of their existing number doubling their wages and getting four times the output. Hence trade unions are resisting the productivity- enhancing measures of the company as they render the workers redundant. Trade unions have to fight hard to save workers jobs.

1.2.2 Changes in Technology

Rapid changes in technology have led to skill obsolescence in workers, hence loss of their control over jobs. This has become a major challenge for trade unions. Workers skills have to be updated for security of their jobs and survival of their company. Lost jobs also mean depletion in union membership.

1.2.3 Lack of Government Support

Government's attitude is shifting from being labor friendly to being investor friendly. The introduction of liberalization privatization and globalization policy in India has led to a decline in unionism.

1.2.4 Managerial Strategies and HRM Policies

In pre LPG era security of jobs was almost ensured, even if the private or public companies became sick. Government's labor friendly policies provided assurance against retrenchment. Introduction of new technology has transformed a large number of blue collar jobs into a few white collar jobs. It has also increased management's control over work as workers face skill obsolescence. New HR practices are emerging that emphasize individualism, direct participation of workers, unit level (rather than industry level) bargaining etc. This has further weakened the union power and increased the managerial power.

1.3 Measures for Strengthening Trade Union Movement in India

Keeping in mind all the above challenges for unionism various measures have been suggested by scholars and practitioners to strengthen trade union movement in India:

1.3.1 Internal Leadership

Developing internal leadership can eradicate many of the challenges faced by trade unions. The unions will grow fast, become stronger and understand and address the problems of workers better if the leader is from amongst the workers. Management and trade unions can join hands to provide educational and training facilities for developing internal leadership.

1.3.2 Strong and United Labor Front

Multiplicity of unions automatically reduces the effectiveness of unions, dilutes their power and dissipates their energies. Presenting a united front will strengthen their bargaining power as well as facilitate their efforts for improving the plight of workers by securing their legitimate rights.

1.3.3 Ensuring Financial Stability

The NCL suggested the union membership fee should be increased from 25 paise to 1 rupee. This suggestion was rejected by the government. Another recommendation of NCL for introducing check off system was not acceptable to the workers and unions. Deduction of membership fee from salary under check off system could strengthen the financial position of unions as chances of defaults in payment would have been reduced. Increase in membership fee can be a very important measure to ensure financial stability of the union.

1.3.4 Paid Union Officials

Lack of funds often forces unions to have honorary office bearers. Most of these office bearers fail to do full justice to the task entrusted to them because of paucity of time at their disposal. To become effective, the unions need to hire paid office bearers who will devote sufficient time to union activities, can evaluate demands of the workers and can negotiate with the management on equal footing.

1.3.5 Recognition of Trade Unions

The major reasons given by employers for withholding recognition of the union are either the small size of the union or the multiplicity of unions. The employers have to work out some procedure for recognizing the most representative union. The check off system recommended by NCL 2006 is a convenient method for verifying the membership of different unions. The strongest union can act as the bargaining agent of the workers.

1.3.6 Expansion of Union Activities

The unions should not restrict themselves to securing economic benefits for the union members. They can include social and welfare measures as well as cultural activities to enhance the utility, popularity and strength of the union.

1.3.7 Raising the Declining Membership

Trade unions can broaden their base by extending their boundaries to unorganized sector. A large chunk of the work force come from IT sector and IT enabled organizations like tours and travels, telecom services, catering, fast food, transport etc. Tapping these sectors will largely enhance the membership base of unions.

1.3.8 Other Measures

- Trade unions must move from their obsession with political ideology to becoming partners in progress with industry.
- Transiting from bureaucratic and self oriented organization to democratic and service organization.
- Moving from complacency to action.

- Online connectivity to overseas employers, trade unions and trade bodies.
- Accommodating diverse opinions, interests and positions.
- Continuous training and development programs related to leadership skills, technical skills and skills to handle new technology.
- Amendment of Trade Union Act to avoid dual membership.
- Provision in central legislation for recognition of representative union.

2. Conclusion

India has the credit of having the largest number of trade unions but their development has been very slow and unimpressive. Till present only 28% of the workers are a part of the trade unions. The existing number has also started dwindling, gradually reducing the size of the unions. Trade-unionism in India is more or less restricted to major metros and that too in large scale units. It has failed to influence the smaller industry and more prominently the unorganized sector. However, of recent, a major shift can be seen. The number of workforce is increasing largely in the unorganized sector. This has generated an increasing interest in this sector. Trade unions are making efforts to organize workers in home-based industries; beedi; fisheries; stone quarries; agriculture and plantation; construction; and forestry etc. A few unorganized workers' organizations such as labor cooperatives, Morcha and some NGOs are trying to promote workers' welfare. This will widen the base of trade unions as well as ensure the welfare of unorganized labor.

Recently some other new trends are being observed in the Indian trade union movement. Emergence of independent trade unions, merger moves (though failed ones) by various CTUOs like AITUC and HMS, distancing of trade unions from affiliated political parties, professionalizing of unions and democratization of unions etc. are some of the important and unprecedented steps being taken by the unions to ensure their survival and growth in the face of various challenges discussed in this paper as well as the challenges posed by the forces of liberalization, privatization, and globalization.

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Empirical Study of Issues Leading to Women Empowerment using Data Analytics

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Abstract

The paper calls for adopting a multi -dimensional endeavour. An empirical study on the data as obtained from the Open Government Data Platform of India (data.gov.in) of Ministry of Women and Child Development has been exhaustively dealt using data analytics tools. Correlation between the following vital parameters leading to women empowerment and corresponding trends have been comprehensively dealt in the said study[10].

Keyword: Education, mission, women, empowerment, literacy

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1. Introduction

Democracy in 21st century is moving towards equality and inclusion. Today, women empowerment has remained one of the major developmental agenda in all the policy decisions of India. India has exemplified a promising model in the field of women's empowerment at the grass roots. The present educational policies implemented with the objective of enhancing overall improved female literacy rate is yielding results[2].

Various government schemes such as National Literacy Mission, Adolescence Education Programme etc. have contributed immensely to the development and empowerment of women through education. Female literacy rate as per Census 2011 is 65.46% which is low compared to male literacy rate of 82.14%, but it has improved over the time due to informed society. The state of Kerala is the leader in female literacy with the rate of 91.98 whereas the state of Rajasthan is lowest with the female literacy rate of 52.66.

Further, the presence of women in the workforce have contributed a lot towards the increase in GDP of the country adding to economic development as a whole[6].

Women education plays a crucial role in the social and economic development of the country. There is a strong empirical evidence to suggest that money in the hands of the mother increases expenditure on children. There is a strong positive correlation between women's status and economic/social development. Hence the study of impact of female literacy become all the more important.

2. Research Objective[9]

The objective for choosing this particular data set was to find out as to how female literacy has affected the lives of women in recent times. Data analytics tool has been used to establish the co-relation between various vital parameters in the data set.

The main objectives of the study is to analyse the following using analytical tools:

i. Correlation between Women Literacy Rate and Mean Marriage age of Women
ii. Correlation between Literacy Rate and Total Fertility Rate
iii. Correlation between Literacy Rate and Crude Birth Rate

3. Research Methodology[3]

The data has been taken from India Census 2011 and the Open Government Data Platform of India (data.gov.in) to understand and study the relationship between various parameters like the female literacy rate, mean age of female marriage, fertility rate. The state wise literacy rate of India has been also studied and taken into account.

The data thus obtained has been analysed and the results have been displayed in the pictorial form as Scatterplots. In fact, a scatterplot is a type of mathematical diagram that displays the effect of one variable on other variable. The relationship between two variables is called their correlation.

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In a scatter plot, the data is displayed as a collection of points, each having the value of one variable determining the position on the horizontal axis and the value of the other variable determining the position on the vertical axis. The trend is represented by a trend line[11].

4. Data Analytics and Observations[1,4,7,12]

The analysis of the data as obtained from the authentic sources[12] has shown very interesting results as discussed below:

- As per data of Census 2011 for 21 states, it is observed that there is a positive correlation of 0.522 between female literacy rate and mean age of marriage.
- Further, the trend line shows a positive linear relationship between the female literacy rate and mean age of marriage.
- However, the state of Jammu and Kashmir shows a diversion from the normal trend, thereby implying that there are some cultural differences.

4.1 Correlation between Female Literacy Rate and Mean Age of Marriage

It is evident from the graph that literacy rate has positive effects on the mean age of marriage in case of girls. There has been a considerable shift in the marriage age of girls. Earlier women used to get married at a younger age probably due to lack of education and exposure.

- But with increase in the female literacy, more and more girls are getting educated and are becoming confident. The girl's preference is shifting towards higher education rather than marriage. This trend shift is towards the positive direction and is quite visible in in the Figure 1 above.

4.2 Correlation between Female Literacy Rate and Total Fertility Rate

As per the data available on literacy rate of female and total fertility rate, it is observed that there is a negative correlation of 0.663 between the two variables.

- The negative correlation implies that as the literacy rate of women increases, more women adopt for family planning techniques, which has resulted in reduced rate of Total Fertility.
- Further, this strongly reflects women empowerment wherein the women has started playing significant role in family planning and can decide for themselves without being forced to bear any kind of burden.

4.3 Correlation between Female Literacy Rate and Crude Birth Rate

After exhaustive analysis of the available data, it is observed that there is a negative correlation of 0.726 between the female literacy rate and crude birth rate.

- The negative correlation between the above two parameters imply that as the literacy rate of women increases, more women adopt for family planning techniques, which has resulted in reduced crude birth rate.
- However, there are a few outliers such as Andhra Pradesh and Arunachal Pradesh, where the literacy rate is low as well as the Crude Birth Rate. This may probably be attributed to the reasons such as lack of medical facilities, poverty and cultural differences.

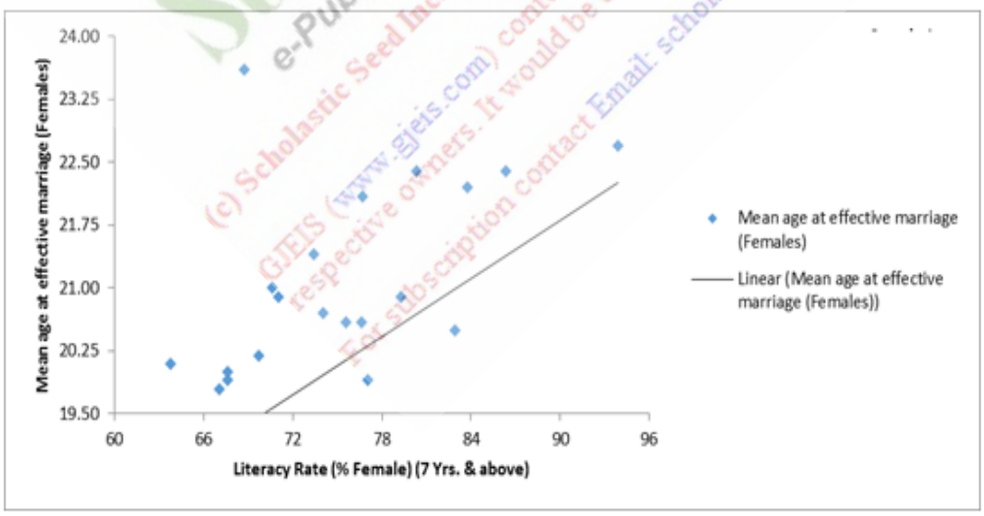

Figure 1. Literacy Rate of Female from Angle-1.

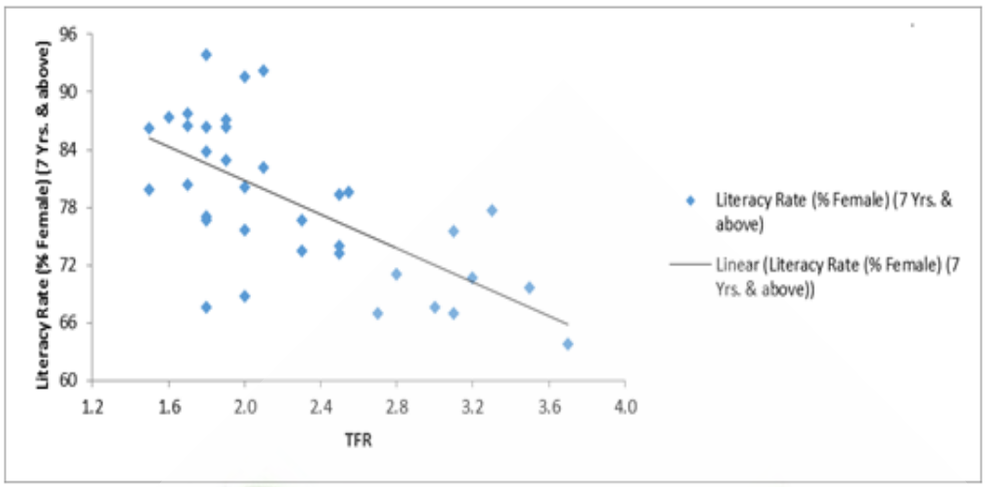

Figure 2. Literacy Rate of Female from Angle-2.

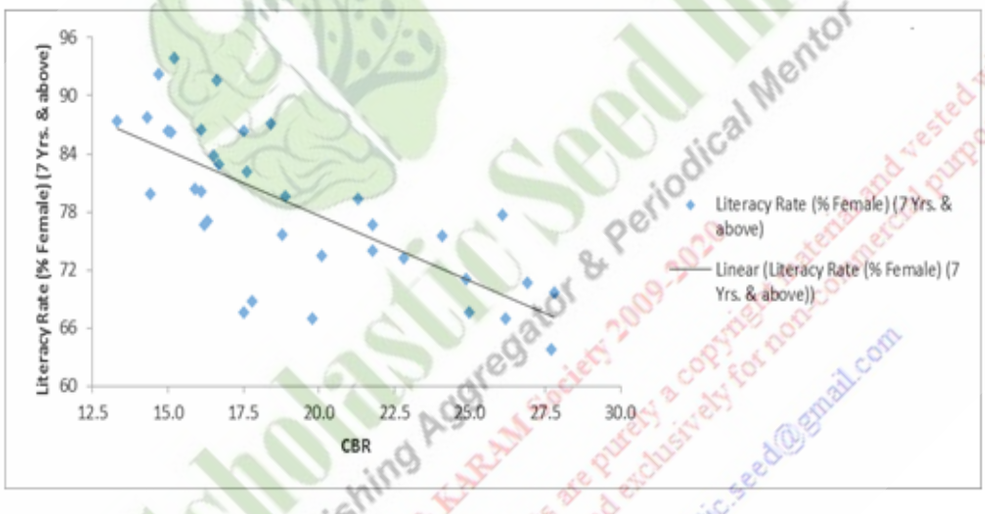

Figure 3. Literacy Rate of Female from Angle-3.

- Reduction in crude birth rate has also led to improvement in the health condition of women and that of the children as well. The infants are born healthy which also ensures that they would have better mental and physical conditions. Further, this would reduce the problem of malnutrition. In fact, reasonable and acceptable health statistics of the population bode well for the development of the country as a whole.

5. Conclusion

Through various studies, it has been found that the females can maintain a good balance between the workplace and the family. Effective inclusion of the females in the workforce of the country would contribute in increased GDP of the nation[6].

Further, the above study has impressed upon the fact that there is a positive correlation between the female literacy rate and improved quality of their live. The rising trend line between the female literacy rate and mean marriage age clearly depicts women empowerment with positive shift on the marriageable age of the literate females.

The reduction in the total fertility rate and crude birth rate definitely provide an impetus to the better informed and educated females to take their own decisions leading to women empowerment.

6. Recommendations

- Based on the data analysis and the observations made therein, it can be recommended that the emphasis on women literacy

should continue and should be further accelerated to improve upon the various indicators of the nation[6].

- There are still few states such as Bihar, Andhra Pradesh, Arunachal Pradesh, Rajasthan, Jharkhand where the female literacy rate is quite less as compared to the rest of the country. As reflected above, low female literacy rate adversely impacts the women empowerment. Less literate females are more subjugated to household work as they find themselves less informed/competent to compete with more informed work force. Further, this adversely impacts their decision making capabilities and self-dependence and vital decision on marriage[13].
- The results of the analysis and study demonstrates that there is a significant inequality in female literacy rate among the various states of India. Hence emphasis should be laid on enhancing female education including equal opportunities to all the females of the country.
- A whole sum education should be imparted so that they are able to efficiently apply their knowledge in the various practical spheres of live. Effective regulatory mechanisms may be used to regularly monitor the quality of education[5].
- Programmes like National Literacy Mission which aims at educating adults in the age group of 15-35 should be implemented appropriately and efficiently. Efforts may be made to enhance female participation in literacy programmes.

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Need for Customized Soundex based Algorithm on Indian Names for Phonetic Matching

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Abstract

In any digitization program, the reproduction of the handwritten demographic data is a challenging job particularly for the records of previous decades. Nowadays, the requirement of the digitization of the individual's past records becomes very much essential. In the areas like financial inclusion, border security, driving license, passport issuance, weapon license, banking sectors, health care and social welfare benefits, the individual's earlier case history is a mandatory part of the decision making process. Documents are scanned and stored in a systematic method; each and every scanned document is tagged with a proper key. Documents are retrieved with the help of assigned key, for the purpose of data entry through the software program/ package. Here comes the difficulty that the data, particularly the critical personal data like name and father name etc., may not be legible for the reading purpose and the data entry operators type the characters as per their understanding. The chances of error is of high order in name variations in terms of duplicate characters, abbreviations, omissions, ignoring space between names and wrong spelling. Now the challenge is that, result of data retrieval over these key fields may not be proper because of the wrong data entry. We need to explore the opportunities and challenges for defining the effective strategies to execute this job without compromising the quality and quantity of the matches. In this scenario, we need to have an appropriate string matching algorithm with the phonetic matching. The algorithm is to be defined according to the nature, type and region of the data domain so that the search shall be phonetic based rather than simple string comparison. In this paper, I have tried to explain the need for customized soundex based algorithm on phonetic matching over the misspelt, incomplete, repetitive and partial prevalent data.

Keywords: Component, Demographic Data, False Positive, False Negative, Phonetic Matching, Soundex Based Algorithm

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1. Introduction

Lot many researchers have already worked on the Information retrieval depends upon the various requirement. One such requirement is the phonetic matching of the names with the names in the database by comparing the way of pronunciation of words. In Indian perspective, the names in the database shall belong to various states of republic of India. In the practical scenario, globally these individual names shall be heterogeneous in nature having wide range of varieties; but, locally homogeneous in nature in respect of the common names, spellings and pronouncing method. The earlier decade data collected from the handwritten files through the manual data entry process may not be of high level of accuracy. The document may not be legible for reading the personal data and the data entry operator could have entered the data as per the pronunciation best known to him. He could have guessed the possible spelling of the name during the data entry process. These issues need to be addressed as part of the retrieval system while utilizing this type of data in any decision making system. Phonetic algorithm matching is basically to compare the names for similar sounding names irrespective of the spelling of the name in the database. Hence for retrieval purpose, phonetic matching is highly required for reading the personal data from the database. Soundex based techniques play an important role in retrieval of names from the database. Phonetic matching is used to evaluate similarity of the names without looking into to the actual spelling of comparing the name by character to character. The most common issue with name matching is the name variations of categories largely of Phonetics, little bit of partial Name, abbreviation, Regional & uncommon names. In fact, the comparison is being carried out on the soundex coded string and not on the actual name.

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The paper is organized as follows. Section I gives the introduction of the subject matter of this paper. Section II gives the introduction to the phonetic matching. Section III gives the understanding of the concepts of soundex algorithm. Section IV gives the details of the proposed algorithm for the Indian names for the purpose of storage and retrieval. Section V shows the experiments and performance with proposed algorithm. And, the last section VI concludes the paper and followed by references.

2. Phonetic Matching

In every part of life, the phonetic matching plays a very important role. Phonetic matching can be defined as a process of identifying a set of strings those is most likely to be similar in sound to a given keyword. The strings can be spelled using different writing styles but they can be matched phonetically[1]. A phonetic algorithm is an algorithm for indexing of words by their pronunciation. They are necessarily complex algorithms with many rules and exceptions just because of the English spelling and pronunciation is complicated by historical changes in pronunciation and words borrowed from many languages. Phonetic matching is used to identify strings that may be of similar pronunciation, regardless of their actual spelling[2]. To understand the working of matching operation we will discuss the example of large database that consists of the names Stefan, Steph, Stephen, Steve, Steven, Stove, and Stuffin[3]. Suppose that we want to search for the name Stephen[3]. The matches that the search finds are called the positives, and those names that it rejects are called the negatives[3]. Those positives that are relevant are called true positives, and the others are false positives[3]. There is no single best technique available. Objective of selecting a suitable technique is to reduce the false positive and false negative cases[8].

As an example, let us assume that the matches found when searching for Stephen in the above database are Stefan, Stephen, Steven, and Stuffin[3]. The first three are probably relevant, and are names that we would have wanted to see. So these are the true positives[3]. Stuffin, however, is probably not relevant – it is a false positive[3]. The names that were rejected are Steph, Steve, and Stove[3]. Of those, Stove is probably not one that we would have wanted. So it is a true negative[3]. But Steph and Steve are ones that we would probably be interested in[3]. They are false negatives. A large number of researches are already being carried out in a well known area of information retrieval under data mining. One of such technique of information retrieval is phonetic matching which is used to compare the name based on the pronunciation of the words. The similar sounding words could be retrieved from the large database. For this, many name matching algorithms are used like soundex algorithm, Edit Distance algorithm, K-String and Q gram algorithm, Guth algorithm, Daitch Mokotoff algorithm, Metaphone coding algorithm.

3. Soundex Algorithm

Searching names in large database have always been a problem. The solution to the problem was given by Robert Russell in1912 as he proposed the soundex algorithm[4]. The names might be misspelled in a large database or might not be spelled as one expected. In this case rather than looking for exact matching, searching for approximate matching will be significant[5,6]. One solution is to say that two names are approximate matches if they sound the same. Here, the question is, whether we could build the right algorithm with the sound principles that can be extended to reduce the error rate[7]. Soundex is the best-known phonetic matching scheme. Developed by Odell and Russell, and patented in 1918, soundex uses codes based on the sound of each letter to translate a string into a canonical form of at most four characters, preserving the first letter[2]. Soundex is a system whereby values are assigned to names in such a manner that similar-sounding names get the same value. These values are known as soundex encodings. A search application based on soundex will not search for a name directly but rather will search for the soundex encoding. Based on the soundex encoding the similar sounding names would be retrieved from the large database.

Outline of Soundex Algorithm[2]

- Retain the first letter of the string
- Change all occurrences of the following letters to zero: a, e, h, i, o, u, w, y
- Assign numbers to the remaining letters (after the first) as follows: b, f, p, v = 1; c, g, j, k, q, s, x, z = 2; d, t = 3; l = 4; m, n = 5; r = 6
- Remove all pairs of digits which occur beside each other from the string that resulted after the previous step.
- Remove all the zeros from string that results from the previous step.
- Return the at most four characters, right-padding with zeroes if there are fewer than four.

Taking an example we will see how soundex algorithm works. Example-"SMITH" will code to "S5030" which will then reduce to "S530"by computing the steps of soundex algorithm.

4. Proposed Algorithm

The design of this proposed algorithm is to help the Indian names matching retrieval system that sounds similar irrespective of their spelling. In the proposed algorithm, the soundex based algorithm is customised to create the coded string in a specialized fashion. For the purpose of this study, only single component name has been taken for the analysis purpose. Each and every name shall go through the customised process (Figure 1) of cleaning,

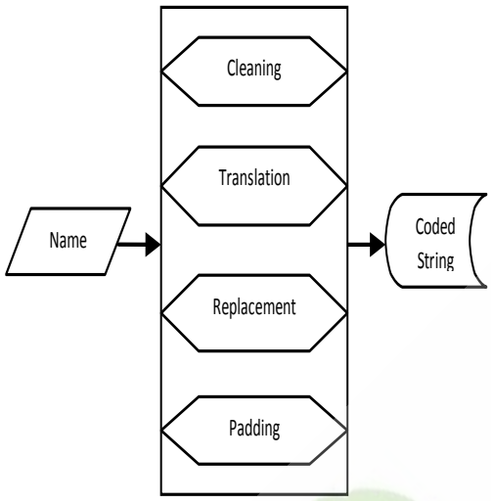

Figure 1. Customised Process.

translation, replacement and padding and the coded string is stored in the database accordingly. During the name searching operation, the search name is codified in the same fashion and the coded string is compared with the coded string stored in the database. Outcome of this process shall include false positive and false negative cases in the result set that needs to be narrowed down.

Cleaning:

- In this module, the character in the name or surname is being scanned one by one.
- Only the alphabetical characters are selected for forming the coded string.
- All the other characters including space, numerals and special characters are removed.

Translation:

- The result string of cleaning module is taken as the input for this module.
- The first character of the string is always retained as it is unless otherwise the letter 'E'.
- In case if the first character is 'E', then it is translated to 'I'.
- If the character is 'V', then it is translated to 'W'.
- If the character is 'J' then it is translated to 'Z'.
- If the character is 'Q' than it is translated to 'K'.
- The characters 'A','Y','I','U','E','O' are dropped.

Replacement:

- The result string of translation module is taken as the input for this module.
- Replace the characters 'PH' with the character 'F'.
- Replace the characters 'TH' with the character 'T'.
- Replace the characters 'DH' with the character 'D'.
- Replace the characters 'SH' with the character 'S'.
- Replace the characters 'CK' with the character 'K'.
- Replace the characters 'GH' with the character 'G'.
- Replace the characters 'KH' with the character 'K'.
- Replace the characters 'CH' with the character 'C'.

Padding:

- The result string of the replacement module is the input to this module.
- The string is truncated to a maximum of 4 characters if the string is more than four characters.
- If the string is less than four characters, then the character zero '0' is padded on the right.
- The result string is the proposed coded string.

5. Experiments with Proposed Algorithm

The implementation of this algorithm is proposed in simple steps and without much complication. The algorithm shall be implemented by using any programming language depends upon the convenience of the developer who wants to use it. Since the proposed algorithm is for the large database search, any database programming language shall be suitable for the implementation. I used oracle pl/ sql database programming language for the purpose of testing and analysis. One component Indian names are tested in the generic soundex algorithm as well as in the proposed algorithm to witness the performance of the proposed algorithm over the generic soundex algorithm. The result of the proposed algorithm is very much appreciable with minimal false positives/ negatives for the names, irrespective of the way it is being spelled. For the testing purpose, several names from various states have been considered to have the effect of the proposed algorithm in the process of name search. The effect shall be analyzed in quantitative as well as qualitative dimensions, i.e., the number of matches and relevancy of the matches.

For the experimental purpose, a sample of 448 cases picked up to work on 4480 names in the database. Each and every sample name has been tested against the names in the database. The soundex algorithm brought 2300 matches and the proposed algorithm brought 1289 matches that include all true positives, true negatives, false positives and false negatives. The overall performance of the proposed algorithm in respect of the matches is given in figure 2.

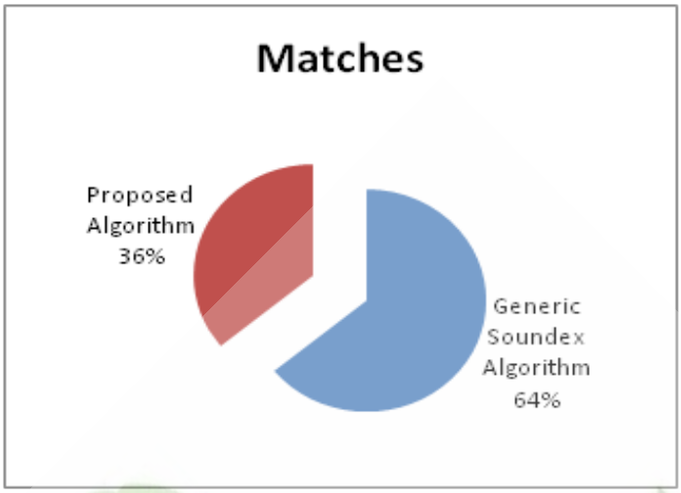

Figure 2. Performance Chart.

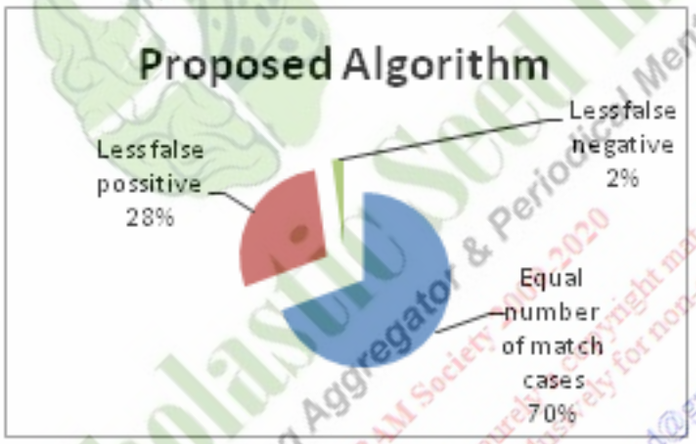

Figure 3. Performance Chart.

It is observed that, the soundex algorithm and the proposed algorithm performed equally in 69.42% cases. For example, the name 'PRAKASH' has exactly the same number of matches in both the algorithms. But, at the same time, we could see the avoidable false positive cases in 28.35% cases. For example, in the generic soundex algorithm, the name 'SANJAY' has the matches "SANGHA, SANJAY, SINGH, SUMESH, SINGHI, SANGE, SANGYU, SINGKO, SAMYIK and SING". The names like 'SINGH, SUMESH, SINGHI, SANGE, SANGYU, SINGKO, SAMYIK and SING' are not having any relevancy. The proposed algorithm matches with only name called ' SANJAY'. And, of course we could see 2.23% false negative cases that are missing in the soundex algorithm. One such example of false negative is that, the name 'CHAND'. The names like 'CHANDA, CHANDRAN, CHANDRA, CHANDILA, CHANDER, CHANDELA, CHANDAR and CHANDRASEKAR' are the names that we could have been interested in. The same has been illustrated in figure 3.

Also, it is observed that the quality and quantity of the matches were ensured in the proposed algorithm and some examples are illustrated in table 1.

6. Conclusion

There are many method of creating phonetic codes for Indian names. However, performance depends on naming conventions, which depends upon part of the globe, of the subject. This paper proposes the effect of proposed algorithm for creating the phonetic codes for the significant improvement in the results on the search of Indian names in terms of accuracy than the generic soundex algorithm. The effect of the proposed algorithm plays a major role in defining the soundex components depending upon the nature

Table 1. Match Table

S.No.	Name	Generic Soundex Algorithm	Proposed algorithm
1	SANJAY	SANGHA, SANJAY, SINGH, SUMESH, SINGHI, SANGE, SANGYU, SINGKO, SAMYIK, SING	SANJAY
2	AJAY	AHUJA, AS, AKSHAY, AJAY, A.K., AKHA, ASI, ASH, A.C, AJA, A.S	AJAY, AJA
3	GOEL	GOEL, GULI, GOAL, GOYAL, GIALO, GOLO,	GOEL, GULI, GOAL, GOYAL, GIALO, GOLO
4	SARA	SURYA, SHRI, SORA, SARA, SHER, SRO, SRI, SIROHI	SURYA, SORA, SARA, SRO, SRI
5	KUMAR	KUMAR34, KUMAR, KAMAR, KIMAR, KEMAR, KUMAR12	KUMAR, KAMAR, KIMAR, KEMAR
6	LAL	LOLY, LALI, LAL	LOLY, LALI, LAL
7	SINGH	SANGHA, SANJAY, SINGH, SUMESH, SINGHI, SANGE, SANGYU, SINGKO, SAMYIK, SING	SANGHA, SINGH, SINGHI, SANGE, SANGYU, SING
8	RAJ	RAGHU, RISHI, RS, REGHU, RAJU, RAJA, ROJO, RAJ, REGO	RAJU, RAJA, ROJO, RAJ
9	PRAKASH	PARKESH, PRAKESH, PRAKASH, PARKASH	PARKESH, PRAKESH, PRAKASH, PARKASH
10	MANJU	MANOJ, MANAKI, MANESH, MANJU, MINGKI, MAYANK, MAYING, MANISH, MANGKHYA, MINGE	MANOJ, MANJU
11	TEJ	TAGI, TEJI, TAYAGI, TACH, TECHI, TEK, TAKU, TAGIA, TOK, TOCHA, TYAGI, TAKA, TAK, TEJ, TAKO, TAJA, TASO, TAJO, TAGE	TEJI, TEJ, TAJA, TAJO
12	NARENDER	NARENDER, NARENDAR, NARENDRA	NARENDER, NARENDAR, NARENDRA
13	CHAND	CHANDA, CHANADO, CHAND	CHANDA, CHANDRAN, CHANADO, CHANDRA, CHANDILA, CHANDER, CHANDELA, CHANDER34, CHNADILA, CHAND, CHANDAR, CHANDRASEKAR
14	RAMESH	RAHAMAJ, RANKA, RINKU, RAMNIWAS, RAMESH, RAMJI, RIANG, RANJI	RAMESH
15	KAPIL	KAPIL	KAPIL

& quality of data. Advantage of the proposed algorithm is that the similar sounding names shall be picked up from very large database of personal data irrespective of the data entry method being followed. Also, this proposed algorithm a clear direction in the preparation of soundex coded string on the Indian names by taking care of the regional aspect. Efforts have been made to achieve the objective of minimizing the false positives and false negatives while balancing the number of alternatives during the name search process. The proposed algorithm works far better than the generic soundex algorithm on Indian names. This work shall further be improved in respect of the customization to meet the requirement of the search over the digital libraries.

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The Impact of Business Process Reengineering Interventions - A Case Study of State Bank of India

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Abstract

With the emergence of global players, the Indian banking industry is facing fierce competition not only at its homeland but also with the international market. Due to continuous changes taking place in information technology, preferences of customers and competition, there is a need to redefine the mission objectives and process of the organization, so that the efficiency and effectiveness of the organization can be improved. While State Bank of India continues to dominate the Indian banking industry and its profits continue to grow, it is coming under increasing competitive pressure. The flattening of the world as a result of networking, information technology and globalization, necessitates SBI to bring out the drastic change in its procedural activities and redesign its business process. Business Process Reengineering aims at making the processes to be focused on producing the desired results. It also aims to be efficient by optimally using the available resources, to be cost effective by minimizing overall costs and should be adaptable by being able to adapt the changing customer and business needs. The present study focuses on business process reengineering interventions implemented in State Bank of India and the changes in the organization structure with special emphasis on Agra branches. The broad objective of the study was to relate the concept of Business Process Reengineering as a tool to enhance the competitive strength of State Bank of India and to improve its functioning to a world class level.

Keywords: Business Process Re-engineering, Redesign, BPR Initiatives, efficiency

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1. Introduction

The present paper focuses on business process reengineering interventions implemented in State Bank of India (with special emphasis on Agra branches) and the consequent changes in the organization structure. The broad objective of the study was to relate the concept of Business Process Reengineering as a tool to enhance the competitive strength of State Bank of India and to improve its functioning to world class level.

2. Business Process Reengineering Defined

Business Process Reengineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service, and speed[1].

Business Process Reengineering encompasses the envisioning of new work strategies, the actual process design activity, and the implementation of the change in all its complex technological, human, and organizational dimensions[2].

A business process is a set of logically related tasks performed to achieve a defined business outcome. The process reengineering is the basis for many recent developments in management. BPR involves eliminating, consolidating, and otherwise altering work activities. Reengineering means to do more with less.

Business Process Reengineering aims at restructuring the processes to produce the desired results. It also focuses on the process to be efficient by optimally using the available resources, to be cost effective by minimizing overall costs and should be adaptable to the changing customer and business needs.

2.1 Business Process Reengineering Interventions for Competitive Strength

Business Process Reengineering is more than just business improvising. It is an approach for redesigning the way work is done to better support the organization's missions and reduce costs.

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Any new change or implementation of new policy, strategy or any process in particular requires a deep and extensive study of the existing working of the organization and then proper analysis have to be done. This broad study of the working of organization would help to understand exactly how it is going. Thus the Business Analysis becomes the primary step in developing the competitive strength.

Diagnostic Analysis is the next important step which requires a massive research to understand the areas or fields where the organization is going wrong and also the reasons of going wrong. The major mistakes made by the organization are not to understand the right problems but find solutions to those which are not the problems at all!!

Change has become one constant in business today. Management for change has become concern of every senior business executive striving for his/her organization to be more competitive in this global market place. It was observed that during the change efforts such as downsizing or restructuring the process many of the organizations failed[3]. To overcome this change should be established as a core value in the organization as well it should be continuously and consistently reinforced. Regular customer feedback, clear and consistent communication from top management to employees about the linkages between corporate profitability and individual as well team accountability and making employees a vital part in decision making are the major aspects that should be kept in mind to meet the competitive strength of the organization.

The linkages between people and process mentioned above will certainly help in sustaining change over time by creating culture of team cohesion, continuous improvement, workplace learning and strong alignment with new organizational goals and objectives[4]. But how to create such links in the organization is the major question? Management of Change is the answer to above raised question. The change can be brought up in two levels – transformational level – the level of leadership, mission, strategy, vision, culture etc and another at transactional level – the level of systems management, management practices, human motivation and employees job i.e. the level where the actual everyday work of an organization is done.

3. Backdrop of SBI going for BPR

With the emergence of global players, the Indian banking industry is facing fierce competition not only at its homeland but also with the international market. Due to continuous changes taking place in information technology, preferences of customers and competition, there is a need to redefine the mission , objectives and process of the organization, so that the efficiency and effectiveness of the organization can be improved.

While State Bank of India continues to dominate the Indian banking industry and its profits continue to grow, it is coming under increasing competitive pressure. The flattening of the world as a result of networking, information technology and globalization, necessitates SBI to bring out the drastic change in its procedural activities and redesign its business process.

The State Bank of India is country's largest commercial bank and it dominates the Indian banking sector for more than two decades. In the early 1990s, the Indian government laid down a series of reforms aimed at deregulating the banking and financial industries[5]. Because of the new competitors such as ICICI, HDFC and such other private and non government banks and still hold its number one position, State Bank of India was forced to adopt and develop the new methods and technology.

The bank also had been encouraged to increase its branch network, with little concern for profitability. As former, Chairman Dipankar Baku told the Banker in the early 1990s: "In the aftermath of bank nationalization everyone lost sight of the fact that banks had to be profitable time. For the last two decades the emphasis was on physical expansion[6]."

Under Baku, State Bank of India began retooling for the new competitive environment. In 1994, the bank hired consulting group McKinsey & Co. to help it restructure its operations. McKinsey then led State Bank of India through a massive restructuring effort that helped SBI develop a new corporate culture focused more on profitability than on social and political policy. State Bank of India also stepped up its international trade operations, such as foreign exchange trading, as well as corporate finance, export credit, and international banking.

The implementation of new technology helped the bank achieve strong profit gains into the early years of the new century. State Bank of India also adopted new human resources and retirement policies, helping trim its payroll by some 20,000, almost entirely through voluntary retirement.

3.1 BPR Initiatives taken by SBI

On the basis of the suggestions given by McKinsey, SBI has developed a proposal of BPR including structural changes and introducing new concept and processes[7]. The main objective was to maintain parity and edge on the emerging banking institutions. The changes brought are in such a way that the customers interest is guarded and services to them become more attractive, in turn the bank increase its business capacity. The care is being taken to look into its employee's convenience, interest, facilities, congenial and working environment to facilitate smooth running of bank services and transactions.

The State Bank of India has in the initial phase rolled out nine BPR initiatives – migration to ATM, introduction of Grahak Mitra, Retail Assets Centralized Cell (RACPC), Small Enterprise Credit Cell (SECC), Drop Boxes, outbound sales force, Currency Administration Cell (CAC), Micro Market Cell. Mobile Banking, Cross Selling such as SBI Life, SBI MF, General Insurance and

Relationship Management for personal banking and medium enterprises are some more initiatives adopted tin second phase. The implementation of BPR surely enhanced the quality and speed of decision making. It also helped in meeting the competition and increases the productivity of the bank.

3.1.1 Impact on BPR Initiatives

The introduction of Core Banking Solution (CBS) and the implementation of initiatives under the umbrella of Business Process Reengineering (BPR) drastically changed the functioning of SBI branches. These initiatives gave a competitive edge. Keeping in view the increasing role of technology in SBI operations, information security system increased. Coupled with the initiatives under the BPR Program, these technology initiatives have become appropriate support mechanisms in place to ensure success. Since effective management of change is a process, an organization needs to be committed to change. With the acceptance of restructuring the banks processes as well as the layout State Bank of India has vastly improved in its performance, services as well as in its profitability. State Bank of India strongly believes in improving its quality by adopting the philosophy of "doing it right the first time[8]."

3.1.2 Growth Dynamic

Figure 1–3 clearly indicates the positive impact of Business Process Reengineering initiatives. The Business per Employee which was Rs 45600 in the year 2007-08 increased to Rs 157680 in the year 2014-15. Similarly Profit per Employee increased from Rs 375 in the year 2007-08 which was Rs 615 in 2014-15. State Bank of India has a vast improvement on its deposits and advances also. It used to be Rs 537404 and Rs 416768 in the year 2006-07 which shoots up to Rs 1576793 and 1300026 in the year 2014-15. In 2013-14 there is a sharp decline in the profit per employee which can attributed to the fact that there was a prolonged slowdown in the general macro-economic condition of the country. Moreover in this year the bank increased the provisioning of the NPAs. But again we can see a rise in the profitability condition of the bank.

Figure 1. Business per Employee.

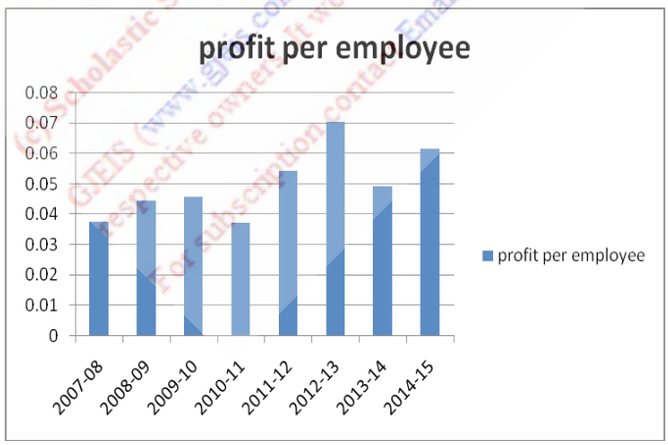

Figure 2. Profit per Employee.

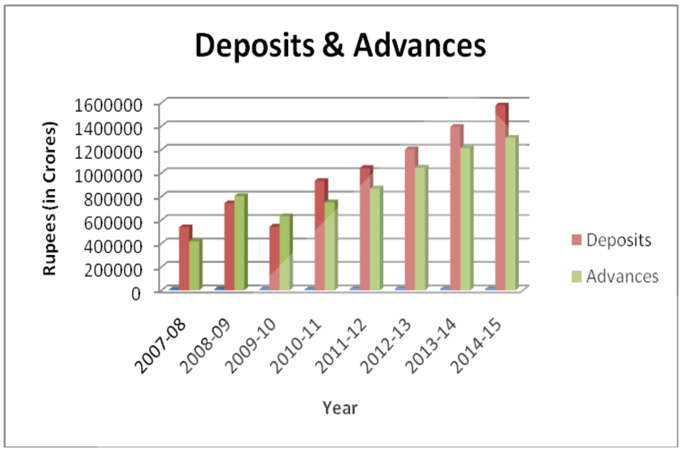

Figure 3. Deposits and Advances.

State bank of India has also been recognized as Best Bank of the Year 2009 by Business India Group, Best Banker of the year for two consecutive years by the banker Magazine and many more[9]. In the year 2013-14 also bank was conferred with many awards for its technology ang CSR practices. This clearly indicates that Business Process Reengineering facilitate in quantitative advantages and therefore improves the quantitative strength of State Bank of India.

4. Conclusion

In this ever changing world , the banking scenario is based to experience new changes and as such BPR exercise is a never ending phenomenon and there would be a continued necessity to review the existing initiatives and take up new ones for sustainable growth of State Bank of India. Let State Bank of India not shatters the aspirations and expectations of its valued customers and maintains its top position.

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Analysis of Service Quality Provided by Golbibo.com in Tourism Industry

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Abstract

With the intensified penetration of internet and the expanded usage of the internet facilities provided by the e-commerce services, and thus generating the craving to find out the best amongst the options available in the net world and the factors deciding it. This paper tries to analyze the optimally and efficiently performing e-commerce services in the Indian context based on ServQual and the evaluation is performed with the parameters highlighted by it. The issue of service quality is tackled from the perspective of "Voice of the Customer". An offline survey has been done in this paper and it is executed through questionnaire with a sample of 70 respondents in Delhi & NCR, to inspect the customers' satisfaction level involved with service quality that is influenced by a series of quality aspects which hinder in delivering the best service quality in Tourism industry. To observe the questionnaire SERVQUAL instrument was used and response was taken to examine the different aspects associated with customer's satisfaction level. It is tested with the help of Statistical analysis (T-Test).

Keyword: Service, Quality, Era, technology, GOIBIBO, Tourism

1. Introduction

As the era is getting more inclined towards the technology, so is the customers and their preferences. Now people want everything to be handy and instant. With the tight scheduling of the jobs they are not even free to make time for a vacation. As a result, numerous hotels are observing and experiencing a visible increase in bookings coming from online travel agencies.

At the same time, direct bookings which are generated from a hotels own personal website, are declining in both absolute and relative terms when the comparison is done to what OTAs generate.

Not only OTA's are ruling and dominating in the area of sales against direct bookings through hotel's own personal website's, they are also being preferred for reservation method by tourists, most visible and observed against small chains and individual hotels.

According to a report from Google, the 2014 Traveler's Road to Decision, 50% of corporate tourists prefer booking through a travel agency with approximately 33% of leisure tourists opting for the same.

According to a survey made by one of the consulting company, online travelling agencies are most preferred over the hotels personal websites.

As we have seen that OTA's are winning the hearts of its customers, the question arises that what are the key factors which has attracted the customers to use these websites???

The answer could be the following factors which influences the customers:-

- Word of mouth – Family & Friends
- Offers tailored by the Online Travelling Websites
- First time user offers provision
- Positive reviews and feedbacks
- Optimisation of Search engines (like google and yahoo etc.)

Thus we can say that online booking systems are making it easier for the customer's to book at the agency, but again it does not help if the customer is not facing enough traffic on the system. The agents interact with their clients in a multiple of ways, and the type technology selected by the agents completely depends on their offering and customer base.

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2. Value of Online Traveling Agency for the Customers

Now as we have seen there are so many offerings made by the OTA's, let us see what are the benefits and disadvantages that are experienced by any OTA's customer.

There are a number of pros and cons faced while using online travel agents (OTAs) to sell facilities.

Ultimately, OTAs give instant access to a large number of potential customers.

2.1 Possible Advantages

- Speedy Transaction
- Eliminate no-shows (studies show that clients are more likely to show up for appointments that they've booked themselves)
- Grip on potential business (only 1/3 customers leave a voice-mail!)
- 24/7 Facility for bookings – Attractive and comfortable for customers
- Access of customers calendar/crm anywhere from any device
- Helps in growing your business
- Reducing the amount of time spended on scheduling and playing phone tag with clients.

2.2 Possible Disadvantages

- If not a fan of technology, online booking might not be appreciated
- No Internet access – no online booking

Choose a system not having great customer support, relying on such system may be difficult.

In a nutshell we can come on a view that online booking helps in fostering better customer relationships and providing better customer service!

3. Value of Online Traveling Agency for the Hotels

We have seen the benefits provided by an OTA to its customers, now let us look with the view point of the Hotels & How the OTA's are providing them facilities?

OTA helps hotels in reaching those customers that otherwise would not have been reached by themselves.

Drive up the rate of occupancy – 90% are booked through OTA's

OTA provide promotions and other marketing opportunities.

Advertise their features and Availability

Along with hotels, also promote travel destinations and ancillary services

Overall, we can conclude that OTA's is not only serving the customers in searching their destination places in least possible prices, also helping out the hotels and related services in finding and allocating new customers.

4. Reasons for opting Online Travel Agencies

4.1 Easy Comparison of Different Airlines at a Glance

A quick comparison of the fares and schedules offered by the various other airlines. Wouldn't you like to travel at the best airline service in the most cheapest fare?!

4.2 Multi-airline Itineraries

The travel agencies will send you only to that site where you can find the most feasible prices according to your budget and with all facilities.

4.3 Flexible Date Searches

Most of the airlines websites do the flexible date searches for over seven days (plus or minus), so that the customers will not get too tedious while selecting their option.

4.4 Packages

Many websites provide the facility of last minute arrangement of hotels and other facilities along with the airfare.

4.5 Opaque Fares

Many websites sell the fares for less than the airlines sites.

4.6 Code Share Airfares

Example of this: Go to Orbitz.com and you'll often notice an odd thing: two flight itineraries leaving and arriving at exactly the same time on two different airlines—let's say Alitalia and Delta. But Delta is selling the trip for $1000 and Alitalia for $600. This is a code share arrangement. Delta has bought seats on Alitalia and is free to sell them at any price it chooses. Go to Delta.com and you'll only see the $1000 fare.

5. Goibibo.com

Goibibo is a Business to Customer (B2C) online travel aggregator. Its headquarter is situated in Gurgaon, India. It is a division of ibibo travel organisation.

Figure 1. GOIBIBO Pedagogy of Searching.

Figure 2. Goibibo Logo.

Goibibo was launched and developed in 2009 by ibibo group. It is a platform that enables the travellers in searching, comparing and buying from across various categories and scope of travel suppliers for air tickets, hotels, and bus tickets.

Goibibo can be accessed via mobile app and is available on iOS, Android and Window.

Goibibo is in the top 3 online travel aggregator of India.

Goibibo's core value differentiator is delivery of fastest and trusted user experience. Be it in terms of quickest search and checkout flow; fast payments, settlement and refund processes. All this is backed by customer service excellence and innovations in our operations and back end. Goibibo enables travellers to search, compare and buy from across categories and width of travel suppliers comprising: air tickets, bus tickets; holidays, hotels and car rentals. Goibibo is also a leading app across mobile operating systems: iOS, Android and Windows. Goibibo takes pride in delivering these services at lowest prices in the market. It is these attributes that has enabled Goibibo to trounce hundreds of players in the online travel space. Goibibo is part of ibibo Group that also owns India's No 1 online Bus ticketing platform, redBus.in.

5.1 History

Goibibo was launched in 2009. The founders of Goibibo are

- Ashish Kashyap (Founder & CEO of ibiboGroup)
- Sanjay Bhasin (CEO of Goibibo)
- Deepak Tuli (COO of Goibibo)
- Vikalp Sahni (CTO of Goibibo)

The Goibibo business focussed basically on only Domestic air segment during its launch year.

- In April 2012, the Goibibo platform added Hotels and International air tickets.
- In March 2013, Goibibo introduced and launched mobile apps on Android.
- In June 2013, the mobile app of Goibibo was extended to iOS.
- In July 2013, flight advise introduced.
- In November 201, bus ticketing was introduced by Goibibo.
- In 2013, redBus.in was acquired by the ibibo group.
- In January 2014, GoCash wallet introduced.
- In July 2014, a commercial focused on driving hotel booking through mobile app was done.
- In 2015 Goibibo.com becomes the first Indian OTA to partner with Google Flight Search.

5.2 Products & Services

Goibibo provides search and booking features and facility for flights, hotels and bus tickets. Flight data such as fare price, arrival-departure timing etc. from all domestic airlines and international airlines is integrated in real-time. A free mobile app for the comfortability of the customers is launched having these functions available for download on iOS, Android and Windows devices.

The platform offers an instant refund function named "GoCash" for customer bookings. Also included are a range of personalization tools called mobile first developments for fare and weather information's, travel plans, favourite hotels and other functions.

5.3 Awards & Recognition

- In 2014, named as "Best Website" (in the Leisure and Travel category) by Website of the Year India (WOTY).
- ET "Promising Brands" Award 2015.

6. SERVQUAL

6.1 Service Quality

"ServQual is an instrument for assessing the usability, information, and service interaction quality of Internet web-sites, particularly those offering e-commerce facilities." To identify and check the service quality provided by the company ServQual is used with respect to the customer's satisfaction level. The five dimensions of QUALITY are (Parasuraman et al., 1988, 1991):

Tangibility includes physical facilities, equipment, personnel and communication materials.

Reliability is the ability to work dependably and accurately for the promised services.

Responsiveness is willingness on the part of service providers for helping the customers and providing service.

Assurance is employee's knowledge, courtesy and ability to convey trust and confidence.

Empathy is giving attention to the individual customers.

7. Objectives of the Study

The objective of the research done for the company was to know about the service quality provided by GoIbibo to their customers. Moreover the secondary aim was also to find out the quality of the service provided by the company over some pre-setted parameters by getting response from the customers who are currently using GoIbibo's service. However, if looked into the questionnaire the purpose of finding out the service quality provided by GoIbibo was a quite successful exercise.

8. Research Methodology

The questionnaire was administrated using ServQual instrument. The design used for the study is descriptive under conclusive design. It is a quantitative design where the defined hypothesis is tested on the basis of primary data which is collected with the help of a structured tool called questionnaire.

The study was done with a sample size of 70 respondents. The respondents were selected for the study from the various customers of GoIbibo. A random sampling was taken.

The research instrument or tool used for the preparation of this project is Questionnaire. A questionnaire consists of a list of questions printed in a definite order on a form to be asked from respondent. In the questionnaire a 7-point Likert scale was used where 1 was for Strongly disagree and 7 was for strongly agree. There were no right or wrong answers – all we were interested in is a number that best showed their expectations and perceptions about the service quality of Goibibo.

9. Data Collection

The approach used for the data collection is Survey Method.

There are two sources of data collection:

9.1 Primary Data

Data collected for the purpose of this project is through:

- Observations
- Survey through Questionnaire

9.2 Secondary Data

Secondary data was collected through:

- Books
- Services
- Internet

10. Hypothesis

Hypothesis is a supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation.

It is a proposition made as a basis for reasoning, without any assumption of its truth.

The hypothesis for this study is constructed below on the basis of dimensions of quality:

- H1: Customers perceived RELIABILITY of service of GoIbibo leads to calculate gap between the expectation & perception of customer.
- H2: Customers perceived RESPONSIBILITY of service of GoIbibo leads to calculate gap between the expectation & perception of customer.
- H3: Customers perceived TANGIBILITY of service of GoIbibo leads to calculate gap between the expectation & perception of customer.
- H4: Customers perceived ASSURANCE of service of GoIbibo leads to calculate gap between the expectation & perception of customer.
- H5: customers perceived EMPATHY of service of GoIbibo leads to calculate gap between the expectation & perception of customer.

11. Analysis

The graph below presents the averages of the various parameters of servqual ie. Tangibility, reliability, responsibility, assurance and empathy. These parameters are calculated by taking an average of the differences between the perception and expectation of the customers for the service quality of Goibibo.

This is as per the analysis of the responses received from the respondents.

Now, we will analyze the same result through the t-test analyses where the perception score and expectation score are taken into consideration for all the 22 items and the results for each tangibles, reliability, responsiveness, assurance and empathy is analyzed. These are analyzed as follows:

We can see that the P value after the t-test of the tangibles that we got is more than the critical value of 0.05 that we have selected

Table 1. Calculations to obtain unweighted servqual score

Average Tangibles SERVQUAL Score	-0.137524752
Average Reliability SERVQUAL Score	-0.221980198
Average Responsiveness SERVQUAL Score	-0.411782178
Average Assurance SERVQUAL Score	-0.397326733
Average Empathy SERVQUAL Score	-0.428712871
Total	-1.597326733

Table 2. t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	23.05797101	18.86956522
Variance	7.467178176	23.99744246
Observations	70	70
Pearson Correlation	-0.065341427	
Hypothesized Mean Difference	0	
Df	68	
t Stat	6.036883979	
P(T<=t) one-tail	3.66477E-08	
t Critical one-tail	1.667572281	
P(T<=t) two-tail	7.32954E-08	
t Critical two-tail	1.995468907	

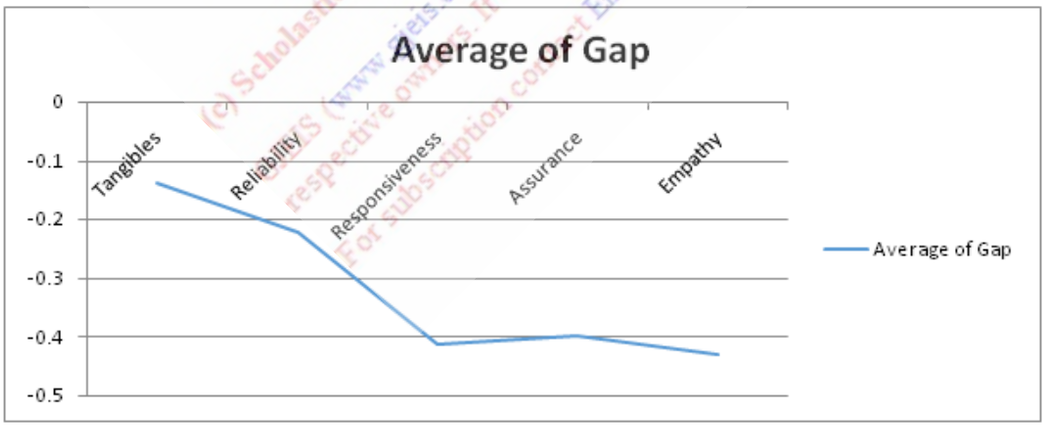

Figure 3.

for the test. So, we will accept the null hypothesis and reject the alternate hypothesis. This means that the visual facilities, equipment, personnel and communication materials of Goibibo are higher than the customer's expectations like visual appearance of the website, creative and modern looking etc.

We can see that the P value after the t-test of the Reliability that we got is more than the critical value of 0.05 that we have selected for the test. So, we will accept the null hypothesis and reject the alternate hypothesis. It implies that the ability to perform the promised services dependably and accurately in case of Goibibo is higher than the expectations of the customers. Reliability considers on right services, solving customer's queries, promises completion and error free records.

In this case as well we can see that the P value we got after the t-test of the Responsiveness is more than the critical value of 0.05 that we have selected for the test. So, we will accept the null hypothesis and reject the alternate hypothesis. It implies that perceived service quality through responsiveness is matching with the expectations. The service providers at Goibibo are readily willing to help customers and provide prompt service. Responsiveness includes exact time of services provision, prompt service, employees ready to help and respond without delay.

We can see that the P value after the t-test of the Assurance that we got is more than the critical value of 0.05 that we have selected for the test. So, we will accept the null hypothesis and reject the alternate hypothesis. It implies that the knowledge and courtesy of employees and their ability to convey trust and confidence is higher than what it is expected out of them-Test: Paired Two Sample for Means for Empathy. Assurance include safe transaction, instils confidence in customers and have genuine knowledge to answer the queries of customers.

Table 3. t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	28.69565217	19.44927536
Variance	13.33248082	20.30988917
Observations	70	70
Pearson Correlation	-0.049657499	
Hypothesized Mean Difference	0	
Df	68	
t Stat	12.93160767	
P(T<=t) one-tail	2.68803E-20	
t Critical one-tail	1.667572281	
P(T<=t) two-tail	5.37605E-20	
t Critical two-tail	1.995468907	

Table 4. t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	20.62319	16
Variance	19.35592	23.5
Observations	70	70
Pearson Correlation	-0.01448	
Hypothesized Mean Difference	0	
Df	68	
t Stat	5.824431	
P(T<=t) one-tail	8.59E-08	
t Critical one-tail	1.667572	
P(T<=t) two-tail	1.72E-07	
t Critical two-tail	1.995469	

Table 5. t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	20.62319	16
Variance	19.35592	23.5
Observations	70	70
Pearson Correlation	-0.01448	
Hypothesized Mean Difference	0	
Df	68	
t Stat	5.824431	
P(T<=t) one-tail	8.59E-08	
t Critical one-tail	1.667572	
P(T<=t) two-tail	1.72E-07	
t Critical two-tail	1.995469	

Table 6. t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	25.57746479	19.04225352
Variance	42.19034205	31.66961771
Observations	70	70
Pearson Correlation	0.251009434	
Hypothesized Mean Difference	0	
Df	70	
t Stat	7.391036001	
P(T<=t) one-tail	1.2035E-10	
t Critical one-tail	1.66691448	
P(T<=t) two-tail	2.407E-10	
t Critical two-tail	1.994437086	

In case of Empathy as well, the P value derived after the t-test is more than the Critical value of 0.05. So, in this case as well we will accept the null hypothesis and reject the alternate hypothesis. It implies that the perception regarding the Caring, individualized attention given to customers at Goibibo is more than the expectations of the customers.

Empathy describes convenient operating hours for customer, give personal attention, understand the specific needs of the customers etc.

12. Recommendations

After analyzing the results of the SERVQUAL with the help of the graph as well as the t-test we can say that the perceptions of the Customer regarding the service quality of PNB is less than his expectations of what an excellent bank's service should be. So, PNB cannot be categorized as an excellent bank as per the responses we have received from the customers. It is not meeting the expectations of the customers on any of the parameters, namely, Tangibles, Reliability, Responsiveness, Assurance and Empathy. This means that:

- The physical facilities, equipment, personnel and communication materials of PNB are below the customer's expectations.
- The ability to perform the promised services dependably and accurately in case of PNB is below the expectations of the customers.
- The service providers at PNB are not readily willing to help customers and provide prompt service.
- The knowledge and courtesy of employees and their ability to convey trust and confidence are below what it is expected out of them.
- The employees at PNB are not caring and do not provide any individual attention to their customers.

The PNB needs to improve on the above parameters so as to enhance its quality of services and increase the customer satisfaction through improves physical arrangements, providing timely services according to the promise made, more willingness to help customers and providing individual attention.

13. Dimensions/ Parameters of SERVQUAL

13.1 Dimension – Responsiveness

Responsiveness – It shows the relationship between customer satisfaction and responsiveness. Here the value of p is less than 0.05. Hence, responsiveness is significant to the customer satisfaction. It implies that customer satisfaction is achieved through responsiveness.

13.2 Dimension – Reliability

Reliability – It shows the relationship between responsiveness and reliability through customer satisfaction which implies that when customer satisfaction is measured then only reliability is satisfying the customers. Here the value of p in reliability is less than 0.05. Hence, it means only reliability is significant and responsiveness is insignificant to the customer satisfaction.

13.3 Dimension – Empathy

This model examines the relationship between responsiveness, reliability and empathy. It implies that when responsiveness, reliability & empathy are measured through customer satisfaction then only empathy is satisfying the customers. Here the value of p in empathy is less than 0.05. Hence, it means that only empathy is significant and responsiveness, reliability is insignificant with respect to the customer satisfaction.

13.4 Dimension – Assurance

This model examines the relationship between responsiveness, reliability, empathy and assurance. It implies that when responsiveness, reliability, empathy and assurance is measured through customer satisfaction then only two variables responsiveness & assurance are satisfying the customers. Here the value of p in responsiveness and assurance are less than 0.05. Hence, it means that only responsiveness and assurance are significant to the customer satisfaction. However responsiveness & reliability are insignificant with respect to the customer satisfaction.

From all the above analysis we conclude that responsiveness and assurance is the two main predictor of the customer satisfaction with respect to the service quality of Ibibo s Pvt. Ltd.

14. Conclusion

Finally, winding up this paper, we conclude that customers are the most important asset of any organization which is needed to be focused everytime. The success mantra of any organization is ultimately depends on how efficient and effectively its customers are being satisfied. Therefore the main agenda of the organization must be to fully satisfy its customers for longer time duration by maintaining their loyalty. In this study we found that all the parameters of servqual ie. TANGIBILITY, REALIBILITY, RESPONSIBILITY, ASSURANCE & EMPATHY are fully satisfying the customers. By focusing on its service quality Goibibo would improve reputation of the company, retain the current customers and add on new customers. Broaden their outlook, capacity and potential with the effective utilization of service quality.

15. Limitations of the Study

- The very first limitation of this study is the small sample size because it was provided by the company itself.
- The second limitation of this study is that the sample size is confined to Delhi & NCR.
- The results of this study cannot be generalized because the samples were heterogeneous in nature and this can be also stated as a limitation for this study.
- The next limitation is the time constraint because the duration of training was short, due to which it was difficult to collect data.
- Sometimes customers don't used to share the true information because of ignorance and their busy schedule.

16. Acknowledgement

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Biographical Sketch of a Luminary in an Area of EIS

A Great Academician and Researcher in Systems Modelling and Analysis,Multi-Criteria Decision Analysis, and Applied Research in Project, Technology and Knowledge Management

L. S. Ganesh
Professor, Department of Management Studies,
Indian Institute of Technology Madras,
Chennai

L. S. Ganesh (aka LSG) is a Professor in the Department of Management Studies of the Indian Institute of Technology Madras. He has over three decades of academic experience involving teaching, research and intellectual services. His academic interests span the areas of Systems Thinking and Applications, Systems Modeling and Analysis, Data and Decision Analysis, Institutional Planning and Development, Social Entrepreneurship, and Project, Technology and Knowledge Management. Earlier, he served as an Associate Fellow in the Educational Planning Unit of the National Institute of Educational Planning and Administration at New Delhi, and then as an Assistant Professor at the Indian Institute of Management, Bangalore.

His research papers continue to be published in the most respected academic journals and are cited often. He is widely respected by his students, peers and audience as one of the most inspiring teachers and orators whose clarity of thought and communication are exemplary, and whose insights and messages are transformational.

International organizations such as the World Bank and the UNDP, and national-level Institutions and organizations such as the MHRD, AICTE, NBA, ISRO, CII, FICCI, and MMA have utilized his expertise and services in some of their projects, programs and events. He has led Executive Development and Continuing Education programs for the most reputed multi-national and national-level organizations, and has delivered Keynotes, Seminars and Lectures to a wide variety of audiences ranging from scientists through business/industry professionals to school children.

He has made significant contributions to the growth and development of IIT Madras and his Department. The noteworthy ones include the launch and development of the MBA program, establishment of strategic relationships through MoUs with international and national-level Institutions and organizations, the promotion and incubation of student-led start-ups/entrepreneurial ventures, the formulation of the IIT Madras' Perspective Plan in 1991, Strategic Plan in 2001, and the second Strategic Plan in 2014. He has served several offices in his Institute including those of Warden, Advisor (Cultural), Advisor (Office of Alumni Affairs), Professor-in-charge of Human Resources Development, and Professor-in-charge of the Cellfor Professional Ethics and Human Values. He has been associated with professional bodies such as the Project Management Institute (India), Society of Operations Management, and Product Development and Management Association (India) in policy-level decision-making positions.

Professor LSG was conferred the Distinguished Alumnus Award by the BITS Pilani Alumni Association (Delhi Chapter) in 2007 and the IIT Madras Alumni Association in 2015.

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Biographical Sketch of a Luminary in an Area of EIS

An Innovator in Blended Learning mode of Education

Professor Manoj Kulshrestha
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Prof. Manoj Kulshrestha, Ph.D from Indian Institute of Technology (IIT), Delhi, New Delhi is Professor of Civil Engineering in School of Engineering & Technology (SOET) at Indira Gandhi National Open University (IGNOU), New Delhi, where he teaches Construction Project Management. Additionally, he is Director of National Centre for Innovation in Distance Education (NCIDE).

During 2013-2016, he was heading the Campus Placement Cell (CPC) of IGNOU as Director. Campus Placements and Employability Enhancing Training Sessions for the students/alumni of Open & Distance Learning (ODL) System have been made a maiden reality under his stewardship in IGNOU.

His research work at IIT Delhi, as per available records, is first of its kind leading to doctoral research on Value Management applied to construction industry.

He has successfully completed IGNOU-CIDC Construction Education and Training Project (IC-CETP) in which two technical diploma programmes were offered for the tradesmen of Corps of Engineers, Indian Army. Around 1400 tradesmen completed the diploma programmes and got permanent opening of Junior Engineer in Military Engineer Services (MES). He also designed and developed an online Post Graduate Certificate in Project Management (PGCPM) in collaboration with PMA, India and CEPM.

A unique vocational education initiative of the country as IGNOU-HERO Motorcycle Technicians Vocational Qualification Project (IGNOU-HERO Project) is being headed by him. Under IGNOU-HERO Project, a certificate programme in Motorcycle Service and Repair (CMSR) for skill development of working motorcycle technicians is on offer. Till date, over 11,500 learners have already been trained and certified through over 40 training centre located across the country.

Apart from being the member of Society of American Value Engineers (SAVE) and ASSOCHAM's National Committee on Education, he is also the member of Governing Council of Construction Skill Development Council of India (CSDCI), a Sector Skill Council (SSC) of National Skill Development Corporation (NSDC). He is also life member of Indian Society for Technical Education (ISTE).

On academic front, he has published over 30 papers in various International/National journals and conferences. Prof. Kulshrestha, a widely travelled scholar, has delivered keynote addresses in various international and national forums on varied themes including Construction Project Management, Value Engineering, Multiple Criteria Decision Theory (MCDT) applied to Construction and Open & Distance Learning (ODL) System etc.

He is the recipient of all India University Gold Medal in 2008 for the innovation in Distance Education for his vocational educational initiative. He was awarded Scroll of Commendation by Construction Industry Development Council (CIDC) in recognition to his contribution to academic excellence in construction industry. He was also awarded World Education Award 2011 and World Educational Leadership Award 2011 for his innovative vocational education initiative under IGNOU-HERO Project.

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Biographical Sketch of a Luminary in an Area of EIS

A Project Scientist and an expert of Biometrics and Network Security

Professor Vinay Kumar Pathak
Vice Chancellor
APJAKTU, Lucknow

Professor Dr Vinay Kumar Pathak Born on June 2, 1969 Dr. Vinay Kumar Pathak had a bright academic career of 16 years as Lecturer, Asstt. Professor at HBTI Kanpur, Project Scientist at IIT Kanpur and again as Professor and Dean at HBTI Kanpur before taking over as Vice Chancellor UOU on 25th November 2009.

Dr. Pathak did his B. Tech. in Computer Science from Harcourt Butler Technological Institute, Kanpur in 1991; M. Tech. from IIT Kharagpur in 1998 and Ph.D. in Computer Science from U.P. Technical University, Lucknow under the joint guidance of IIT Kanpur, November 2004.Research Interests of Dr.Pathak include Computational Geometry and Image Processing. Dr. Pathak has been Instrumental in implementation of Vedic Mathematics in year 1992. He had worked in Media Lab Asia and successfully did the work of info-sculpture.

He worked with Intel Corp. and established a specialized lab in UP Technical University, Lucknow. As HoD of CSE he executed several MoUs with Intel, Microsoft and IBM at HBTI for high-tech learning.

Dr. Pathak has attended many national and international conferences both in the country and abroad including France, Poland, Spain, USA, Portugal, Hungary, Morocco, Korea, China, Macau, Singapore, Egypt etc. Several of his papers presented have been published in national and international journals.Dr. Pathak is a Professional Member of Research degree committee in U.P. Technical University, Member of Board of U P Secondary Education, Member of Board of studies of U P Technical University and Expert member of NBA of AICTE.

Dr. Pathak has taught several courses in the field of Computer Sciences

Dr. Pathak has organized several Symposia including “Biometrics & Network Security” at HBTI, Kanpur, International Symposium on “Recent Trends in Biometric Identifications” at IIT, Kanpur, and Workshop on “Java, J2EE, WebSphere, Linux Technologies” conducted by IBM professionals at HBTI, Kanpur.

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Great Enterprise Contribution to Society

EVx Made Good Idea Successful

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Good ideas are valuable. We level the playing-field so that anyone with a good idea can be successful, no matter in which region or country they live, their educational or other background, or their financial limitations. We partner with universities, institutes, companies and individuals around the world and teach people how to have good ideas. Then, we protect their ideas, and work with our corporate partners to commercialize them. With the largest ideas network in the world - spanning Asia, Latin America and North America - we are truly changing lives and changing the world!

EVx is the future of jobs. With advancements in technology, the implementation or manufacturing of new ideas is becoming less important. For example, a software program that used to take months to develop can now be developed in just a few days. Similarly, physical goods can be readily fabricated or manufactured. Accordingly, the number of available jobs is dwindling. The true value is no longer in the implementation of an idea, but in the idea itself. Essentially, there are many companies that have the management and operational capabilities to implement ideas quickly and cost-effectively. However, what they lack is the steady flow of good ideas. A large number of people will earn their livelihood and their income by selling their ideas and intellectual property assets through EVx!. Corporate Social Responsibility: EVx is an excellent platform where companies can spend their Corporate Social Responsibility (CSR) resources. All companies need innovative, new ideas - from small product enhancements to new products and markets. EVx provides companies cost-effective and strategic access to

innovation and growth ideas, while meeting their CSR and philanthropic goals.

Dr. Sandeep Chatterjee is a seasoned technology expert and business professional with almost two decades of contributions as a thought leader, technologist, consultant, entrepreneur, and author. He was named Young Global Leader by the World Economic Forum for his professional accomplishments, commitment to society and potential to contribute to shaping the future of the world. He founded one of the first mobile payments and wireless transactions companies, which ultimately operated in 11 countries around the world. He sold this company in 2007. Dr. Chatterjee is also the named inventor on over 12 U.S., Indian and other international patents and patent applications. Additionally, he is the Founder and Chief Executive Officer of Experantis LLC, a leading intellectual property and commercial litigation consulting company in the United States. Dr. Chatterjee authors books on how technology and intellectual property are changing lives and the economic landscape in countries around the world. He is also co-author of "Developing Enterprise Web Services: An Architect's Guide", a book published by Prentice Hall, as well as a columnist for mobile and enterprise software systems for a number of leading IT magazines. He was part of the Expert Group that specified the worldwide standard for mobile Web services. Previously, he was Entrepreneur-in-Residence at Fidelity CAPITAL, the venture capital arm of Fidelity Investments. Dr. Chatterjee earned a Bachelor of Science (B.S.) degree in Electrical Engineering & Computer Science from the University of California at Berkeley, and Master of Science (M.S.) and Doctorate (Ph.D.) degrees in Computer Science from the Massachusetts Institute of Technology (MIT). At MIT, his research in mobile and distributed computer systems was selected as one of the most important inventions in computing, and his invention is preserved and showcased in a time capsule at the Museum of Science in Boston, Massachusetts. Other recipients of this honour include Bill Gates, founder of Microsoft, and Tim Berners-Lee, inventor of the World Wide Web. Dr. Chatterjee also attended Harvard University where he studied global leadership, and completed the executive education program offered by Harvard Business School and the Kennedy School of Government

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Great Enterprise Contribution to Society

MTC Global

www.mtcglobal.org

Prof. Bholanath Dutta
Founder, Convener & President- MTC Global
An Apex Global Advisory Body in Management Education
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MTC Global is a global think tank in higher education with a special focus on Management Education having presence in over 30+ countries, over 3000 B-Schools, 30,000 + members, 45 national chapters, 32 international chapters and connected with millions of people across the world through its different initiatives. A participant in United National Global Compact program, United Nations Academic Impact and ISO 9001: 2008 certified organization. It is a non-for-profit organization having HQ in Bangalore, India.

MTC Global is adding immense values to all stake holders in management education through consulting, seminar/conferences, certification program, training and other extension activities. Over the years, it has pioneered many activities to add values in all fields of education starting from elementary level to tertiary level. MTC Global has 50 breakthrough initiatives to educate, empower and elevate the faculty fraternity and student community since inception in the year 2009. Some of the popular initiatives are MTC Global Research and Publication Wing, Career Management Service, Mentor Corner, Centre of Excellence- Conexión, Advocacy Service, Campus Ambassador Program, Accreditation Service, Process Excellence, Teacher Certification Program, Consultancy Wing, Global Award for Excellence to appreciate the contribution of the people in academics and corporate, various value added online and offline certification programs etc.MTC Global is one of the most trusted and highly credible organizations. It is the most common name in Management Education parlance, working 24/7 in line with its vision of 'Educate, Empower, Elevate'

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Great Enterprise Contribution to Society

Adds genuine Value to their English Writing

www.felivicproofreading.com
Email: submitpapers@felivicproofreading.com

Felivic Proofreading was formed by a group of experienced editors with the goal of providing world-class proofreading and editing services for students, academicians, businesses/organisations and private individuals across the globe. Our goal is to deliver a thorough and in-depth proofreading and editing service for clients that adds genuine value to their English writing. As we spend small amounts on marketing and advertising, it is only by delivering a remarkable service to our clients that we are able to generate more business for ourselves. We are highly reliant on our clients sharing their experiences with their friends and colleagues about the great service they have received from Cambridge Proofreading.

Over time, this commitment to quality service has garnered us a strong reputation amongst academic and business circles across the world. Our Quality Guarantee states that all writing edited by our team will exceed the English standards required by publishing houses and universities around the world. This guarantee applies to all documents received by our team, irrespective of deadlines or fees.

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AWARD given at Digital Outreach and Convergence Summit (DOCS-2016) 28th May, 2016 IIT Delhi, IV- LT3

Dr. Pratap Chauhan for his extraordinary Contribution to Indian Ayurvedic doctor and initiating online Ayurveda

Extreme Left: Dr. Naresh Gill Co-Founder KRDWG, Mr. Ajay Arora, Director Forever Life and Co-Founder KRDWG, Prof. (Dr.) Yogender Kumar Yadav, Director General, National Institute of Bioenergy(NIBE), MNRE Kapurthala gives this Award to Dr. Pratap Chauhan who is an Indian Ayurvedic doctor for initiating online Ayurveda medicine and Founder of Jiva Ayurveda,, Extreme Right Dr. Subodh Kesharwani, Founder Editor-In-Chief, GJEIS is an academic partners of the DOCS'16.

JIVA® AYURVEDA	Partap Chauhan is an Indian Ayurvedic doctor and the pioneer of online Ayurvedic medicine. He started the world's first online Ayurvedic clinic, Ayurvedic.org, in the year 1995. Chauhan is the winner of UN's World Summit Award for his Teledoc project on rural medicine. He is the founder of Jiva Ayurveda, an Ayurvedic company which offers online, telephonic and personal consultation to patients across the world.

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GLBIMR, Greater Noida, Ranked 5th in Top 5 B-schools by Outlook Money

G.L.Bajaj Institute of Management & Research, Greater Noida has been ranked 5th in Top 5 B-schools by ROI in the Outlook Money Best B – Schools Ranking . The academic excellence of 19 years has led G.L.Bajaj Institute of Management & Research to achieve a distinctive position in India.

In a recent survey conducted by Outlook Money, GLBIMR, Greater Noida has been ranked 5th in top B - schools. The consistent and stellar performance records of the Institution are the result of extensive exposure and experience in synchronicity with the ever changing industry trends. Dr. Urvashi Makkar, Director General, GLBIMR mentioned that these achievements would not have been possible without the constant guidance of Shri Pankaj Agarwal, Vice Chairman, G.L Bajaj Group of Institutions, Greater Noida.

Issues By
G.L.Bajaj Institute of Management & Research,
Greater Noida

Dialogue India Academia Awards to GLBIMR, Greater Noida

G.L.Bajaj Institute of Management & Research, has been awarded with "**Best B- School in Industry Interface (North India)**", "**Best Emerging Business/Management School of Uttar Pradesh**" and **Dr. Urvashi Makkar has been awarded with "Editor Choice Education Excellency for Best Director" Award by Dialogue India 2016**. The Institute has been awarded with these prestigious awards for the outstanding performance and significant contribution towards achieving Education Excellence in India.

During her address, Dr. Urvashi Makkar mentioned that these achievements would not have been possible without the constant guidance of our esteemed Vice Chairman Shri Pankaj Agarwal of GLBIMR Greater Noida. The award ceremony was solemnized on May 28, 2016 at Ashoka Hotel, New Delhi, in a glittering event which witnessed the presence of around three hundred senior academicians and Industrialists across the whole country.

Dr. Urvashi Makkar, Director General, GLBIMR was also invited as an eminent panelist during the panel discussion held at "2nd Dialogue India Academia Conclave". The theme was Industry Academia Connect - The future of Private Higher Education in India. She enlightened the audience by highlighting the key challenges faced by the Higher Education Institutions and how to improve the quality of Management Education.

Issues By
G.L.Bajaj Institute of Management & Research,
Greater Noida

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CSI IT Excellence Award to Dr. Urvashi Makkar, Director General GLBIMR Greater Noida

It is an honour to share that we add one more laurel to GLBIMR Greater Noida. We are delighted to share that Dr. Urvashi Makkar, Director General, GLBIMR Greater Noida has been bestowed with the 'CSI IT Excellence' Award by Computer Society of India, Ghaziabad Chapter on April 9,2016 at ABES Engineering College. She conferred this award for her significant and extensive contribution towards education in Ghaziabad. During her address, she mentioned that these achievements are not possible without the constant guidance of our Vice Chairman Shri Pankaj Agarwal of GLBIMR Greater Noida.

Eminent Director Award to GLBIMR, Greater Noida

GLBIMR, Director General, Dr. Urvashi Makkar has been awarded with the "Eminent Director of Leading Institute of India" Award by Competition Success Review (CSR). The Institute has been awarded with this prestigious award for the significant contribution towards achieving Education Excellence in Indian Society. Mr. S.K Sachdeva, Founder and Managing Director of Competition Success Review (CSR) conferred the award to our Director General, Dr. Urvashi Makkar, GLBIMR Greater Noida.

During her address, she mentioned that these achievements would not have been possible without the constant guidance of our esteemed Vice Chairman Shri Pankaj Agarwal of GLBIMR Greater Noida. The award ceremony was solemnized on April 24th, 2016 at Le Meridien, New Delhi, in a glittering event which witnessed the presence of around two hundred senior academicians across the whole country.

With best regards,

Divya Singh
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Dr. O. P. Sharma Honoured with the Prestigious National Award "Atmaram Puraskar" by the Hon'ble President of India

While working at IGNOU, Dr. O. P. Sharma has developed a number of innovative & technology enabled learning and support solutions using the newer technologies which includes On-Demand Examination, e-Test, Science @Mobile, e-Resource of Experts, Digital Question Bank, Automated Assignment Generation System, etc. At the same time he has a passion for science popularization in the society. He has contributed more than hundred popular science articles and papers for various magazines, newspapers, web sites, conferences, seminars and books. Since 2001 as Chief Editor he is bringing out a popular science magazine 'Vigyan Apke Liye' in Hindi. He has also authored several popular science books. He is very actively working towards promoting physics education both at school and college level as the President of Indian Association of Physics Teachers (IAPT), RC-1. For popularization of science and Technology through ICT, he has also developed a web portal 'World of Science' www.worldofscience.in.

For his outstanding contribution for popularizing science & technology, he has earlier been honored with several awards and puraskars some of which include Rajiv Gandhi National Gyan-Vigyan Moulik Pustak Lekhan Puraskar (2015) by Shri Pranab Mukherjee, Hon'ble President of India; Sampurnanand Award (2015) by the Chief Minister of Uttar Pradesh;

National Award for Science & Technology Communication(2014) by Dept. of Science & Technology, Govt. of India; Saraswat Samman by Vigyan Parishad, Allahabad; Rajbhasha Ratna Award (2004) and Sahitya Shri Samman (2005), etc. The "Atmaram Puraskar" is one of the prestigious Hindi Sevi Awards given by the Kendriya Hindi Sansthan (Ministry of HRD) every year. Some of the past recipients of this award include well known and eminent scientists, science educationists & science communicators like Prof. Ram Charan Meherotra, Prof. J. V. Narlikar, Prof. D. S. Kothari, Prof. M. G. K. Memon, Prof. Ajit Ram Verma, Shri Gunakar Mulle, Shri Devendra Mewadi, Prof. Yas Pal, Shri Subhash Lakheda, Dr. Subodh Mohanti, Dr. Vinita Singhal.

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We are excited to inform you that the call for Nomination to Digital India Awards 2016 (earlier known as WebRatna Awards) has just been announced! This new avatar of WebRatna reflects the overall vision of making India a Digital Superpower, the focus is on the digital initiatives and citizen engagement.

Log on to our website http://digitalindiaawards.gov.in to know more about the award categories, registration and nomination procedures. Well, for those who had been eagerly anticipating hearing this, the wait is just over!

We are pleased to announce that, In addition to the following existing categories:

- Exemplary Online Service
- Most Innovative Citizen Engagement
- Web Ratna - MINISTRY/DEPARTMENT
- Web Ratna - STATE/UT
- Open Data Champion

Three new Categories of Award have also been introduced:

- Web Ratna District: To reward the accomplishments of the District administration, which has displayed exemplary focus on providing online services and information to the citizen?
- Outstanding Digital initiative by Local body: The Award aims to felicitate outstanding Local Body initiative with a focus on providing exemplary information quality, extent of services provisioning by assessing the service maturity level, service catalogue, transparency, cost effectiveness and efficiency enhancement in terms of service delivery.
- Best Mobile App: India is going mobile. More people today are accessing the internet on their phone than ever before. The Award aims to honour the Best Mobile App launched by a Government entity. Nominated app should have well designed and intuitive mobile interface.

The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. If you are a part of Government entity which provides e-services or have citizen engagement, which has a prominent impact on the betterment of common man, and you feel the initiative deserves honouring, this is the right opportunity for the project to win a Digital India Award. The nomination could also be for an established initiative or a recently improved service, which has the desired potential. If you have come across any other such digital initiatives, please feel free to encourage the concerned authority for applying to the relevant category.

The last season of Awards saw an overwhelming success with nation-wide response and active involvement of numerous well-wishers. The season concluded with the esteemed dignitaries honouring the winners at an elegant grand finale witnessed by a large gathering at India Habitat Centre, New Delhi. Glimpses of Web Ratna Awards 2014 can be viewed here. Be sure, this season would be much more exciting and vibrant!

Web Ratna Awards has established a large following all over the country and commended deserving projects, thus inspiring and encouraging others for good governance initiatives and we hope the same for Digital India Awards as well!

The last date for receipt of nominations is 15th August 2016!

And finally, here's a gentle note to request the nominees to avoid any last minute rush for submissions so that the process is error free and complete in all aspects. So, please ensure to apply and submit the nominations well in advance.

Wishing you Good Luck and have a great season ahead...

Team Digital India Awards 2016

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International Conference on Research and Practical Issues of Enterprise Information Systems

December 13th and 14th 2016
Austrian Computer Society (OCG), Vienna, Austria

The 10th IFIP WG 8.9 Working Conference - CONFENIS 2016 (International Conference on Research and Practical Issues of Enterprise Information Systems) provides an international forum for Enterprise Information System (EIS) researchers and practitioners from all over the world to come together, present and discuss their latest research findings and ideas. The conference is specifically aiming at facilitating the exchange of ideas and advances in all aspects and developments of EIS. On the occasion of its 10th anniversary CONFENIS 2016 will return to its roots and will be held at the Austrian Computer Society (OCG) in downtown Vienna, Austria on December 13th and 14th 2016. CONFENIS 2016 is an event supported by the International Federation for Information Processing (IFIP) and jointly organized by the Vienna University of Technology (TU-WIEN) and the Austrian Computer Society (OCG).

CONFENIS 2016 is organised with the intent:

- To provide an international academic platform for scholars to exchange ideas and latest research results in the field of Enterprise Information Systems.
- To foster long-term relationships among and with researchers and leading organizations worldwide.
- To connect talented delegates from all over the world with leaders in academia, industry and government.
- To further investigate the huge potential of novel EIS developments.

This year the proceedings of the conference will be published in the Springer Lecture Notes in Business Information Processing (LNBIP) Series.

Committee Members (Tentative)

General Chairperson: Li Da Xu (Old Dominion University - USA)

Chairperson: A Min Tjoa (Vienna University of Technology - Austria)

Program Committee

Ismail Khalil (University of Linz - Austria)
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GLBIMR, one of the premier B-schools of India, is organizing International

Conference on "Innovations in Technology: A Roadmap for Achieving Global Competitiveness (ICIT-2K16)" on September 10, 2016, Saturday

Website: http://www.glbimr.org/icit

International Conference (ICIT-2K16) aims to provide a global forum to present and discuss research on Innovations in Technological Fields among academicians and practitioners. Firms need to constantly evolve and explore new ideas for offering not only new products but also targeting new methods of production, new markets, sustainable development etc. Use of innovations in technology to create business value is multi-disciplinary. Conference endeavours to showcase research ideas from academia along with best practices by industry experts resulting in rich discussions and fuel future course of action.

The ICIT-2K16 includes keynote addresses, invited guest talks, plenary/valedictory discussions, paper presentation sessions and best research paper award for each Technical Session. All the participants will be having an opportunity of getting their paper published in:

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In this regard, the faculty members, research scholars, corporate experts are invited for participation. Kindly circulate this invite to your colleagues and friends also.

Looking forward for your kind co-operation in making the event a grand success.

All International Conference (ICIT-2K16) related communication/correspondence should be mailed at conference@glbimr.org.

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Digital Outreach & Convergence Summit (DOCS) 2016

"Digital India is our dream for the Nation": Prime Minister Shri Narendra Modi

Release of Souvenir by Shri Jual Oram, Hon'ble Union Minister of Tribal Affairs, Govt. of New Delhi as Chief Guest at Digital Outreach & Convergence Summit 2016 at I.I.T New Delhi. Shri Jual Oram addressing the participants and audience at the Summit Mr Sohil Chadha, Vice Chairman of I.T.S –The Education Group receiving"Corporate Social Media Leader of the Year" Award at Digital Outreach & Convergence Summit 2016 held at I.I.T New Delhi

The Digital India Initiative launched by Prime Minister Sh. Narendra Modi on 2nd July; 2015 aims to transform the country into a digitally empowered knowledge economy. However, much of India that we dream of is yet to be built. Digital Outreach and Convergence Summit (DOCS) 2016 with a theme of Empowering the Nation was held successfully at Indian Institute of Technology (I.I.T, New Delhi) on 28th May; 2016. The Summit was inaugurated by Shri Jual Oram, Hon. Union Cabinet Minister of Tribal Affairs, Government of India as Chief Guest, in presence of Dr Naresh Gill (Organising Secretary), Mr Ajay Arora (Director), Professor (Dr) Siddharth Gupta (Organising Joint Secretary) with Organizing members Dr Subodh Kesharwani, Mr Prateek Jain and Mr Ravee Singh. The Summit also coincided with completion of two years of NDA Government at Centre and overall one day summit contextualized the digital landscape, explored the challenges and opportunities, effective strategies for digital outreach and convergence. It was marked by invited key note presentations, expert's opinion, scientific paper presentations, exhibitions and interactions. It brought leading entrepreneurs, luminaries from education, healthcare, media, social sector, senior executives from Government, Public sector from India and abroad at one platform that shared and showcased their digital initiatives, innovations and achievements. In the words of Sh Kalraj Mishra ji, Hon. Union Cabinet Minister of MSME "In the digital world new technology tools and techniques for communications are being upgraded at a fast rate to be used to reach out as well as convergence to make one's digital presence felt and recognized by other" Thereby, the summit was meant to upgrade knowledge, skills and sensitivities related to digital reach out and convergence in all aspects of life. A souvenir, brought out by KRDW group, was also released on the occasions that bear the details of Chairpersons, Executive Board Members of the Summit, Distinguished Speakers and moderators.

To name a few, Distinguished speakers included Prof M.P Gupta (Incharge Planning Cell IIT Delhi), Mr Pavan Duggal (Cyber Law expert India), Prof Prabhat Ranjan (Executive Director TIFAC India), Dr Anil Wali (FITT , IIT New Delhi), Dr Pratap Chauhan (Jiva Ayurveda), Dr Charru Malhotra (IIPA Delhi) Lt. General (Rtd.) Ashok Agarwal (Head Operations AVG Technologies Inc, USA) that shared their views on Inclusive digital society, Digital economy, Business digital ecosystem, digital technology and landscaping with Social media and cyber space respectively.Mr Anand Swaroop (Inspector General Police, ITBP Force, New Delhi) and Esteemed Counsellor Rasem S.M Bisharat (State of Palestine to India) were amongst distinguished invitees and shared their views with delegates

and audience.Master Abhinav Singh and Ms. Manika Gupta Class X students of Jaypee Public School also presented Scientific Paper on 'Cyber security' in the Summit and were widely appreciated. Knowledge Resource Development & Welfare Group (KRDWG) conferred "Corporate Social Media Leader of the Year" Award to Mr Sohil Chadha, Vice Chairman of I.T.S The Education Group for his outstanding contribution in integrating social media into the learning systems of esteemed I.T.S Group of institutions. Felicitations were conferred upon Shri Sunil Sahai, Mr Anand Swaroop, Mr Rasem S.M Bisharat (Esteemed Counsellor State of Palestine to India)

Mr Shitij Gupta (Director Horizon Placements) , Mr Ashok Singh, Padmashri Awardee Sahu Sushil Sahai, Prof. & Head Dr Achint Garg (Dept. OMR, I.T.S Dental College, Greater Noida) and Dr Anjali Malik (Principal of Jaypee Public School Greater Noida) by the Organizing Committee members during the Award ceremony of the DOCS event.

DOCS 2016 Proceeding

Prof. MP Gupta, Incharge Planning cell, IIT Delhi, Received Awards from Dr. Naresh Gill, Mr. Ajay Arora and Dr. Subodh Kesharwani, founder Editor GJEIS.

Dr. Naresh Gill, Dr. Ajai Arora, Prof. YK Yadav Director General, Dr. Pratap Chauhan Founder JIVA and Dr. Subodh Kesharwani, founder Editor GJEIS.

Mr Ajai Arora, Mr. Balram, Mr. Bhatia, Dr. naresh Gill, Hon'ble Tribal Minister Mr. Jual Olam, Dr. Subodh kesharwani, Mr. Khaitan, Mr Jatinder Singh PHDCCI, Dr. Aditya Kaushik, Harvard Alumnus

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Initiatives 1

IIT Bombay has Chosen Khadi Angavastrams, a Hindu Traditional White Piece of Cloth or Stole, for the Convocation Ceremony

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The Indian Institute of Technology-Bombay has chosen khadi angavastrams, a Hindu traditional white piece of cloth or stole, for the convocation ceremony of its graduating batch. The move is aimed at evoking a feeling of nationalism in students as khadi is a "national symbol", IIT-Bombay director Devang Khakhar said. Sources said the institute has ordered 3,500 angavastrams made of honey comb towel cotton khadi. Students will drape the piece of cloth over their clothes to mark the occasion. Khadi has been at the centre of Narendra Modi's plan of reviving the traditional textile industry and the Prime Minister has repeatedly exhorted the public to increase its use of the fabric, especially through his monthly radio address, Mann ki Baat. But the decision is expected to reignite allegations that the government is trying to saffronise education and introduce Hindu elements in top institutions to bolster its cultural agenda. Earlier this year, Gujarat Technological University made khadi compulsory for its convocation. "IIT-Mumbai chooses khadi as their convocation robe. After Gujarat University, now khadi has also made a niche in the hearts of authorities of premiere Indian Institute of Technology, Mumbai," said a statement by the ministry of micro, small and medium enterprises. Officials from IIT-Kharagpur said that they were also considering introducing khadi for convocations. "Our objective is always to promote local artisans who require encouragement from people like us. Swadeshi means many things including khadi. So our options are open," said a senior official from IIT Kharagpur. Officials in the HRD ministry said they had not asked any IITs to follow it and they take such decisions independently. A senior official from IIT-Delhi said they had not decided whether to go for khadi-made convocation robes. "Our convocation will be held in the later part of the year and we haven't taken any decision yet". The release described the decision as a significant development that showed that khadi was gaining ground in every sphere of life.

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Type of Articles

We are soliciting different types of article which mainly focused on research issues in the EIS and IT related areas.

1. Empirical Research Papers (ERP) report on completed EIS research that complies with rigorous scientific standards. ERP present original results of completed research studies with the aim of obtaining feedback from fellow researchers. [Limit 16 Pages]

2. Theme Based Papers (TBP) are short papers that present the design and preliminary results of ongoing EIS research studies with an endeavor of obtaining early feedback and further guidance from experts and peers. TBP will be evaluated using the same academic standards as regular research papers (except for completeness requirements). [Limit 12 Pages]

3. Case Study Based Papers (CSBP) describes real-life experiences with EIS that authors wish to share with fellow practitioners and EIS researchers. They focus on problems and solutions in specific contexts. Their aim may be to help other practitioners facing similar problems or to solicit help and possible solutions from other practitioners (or EIS researchers). [Limit 10 Pages]

4. View Point (VP) is a situation for which something is pragmatic or considered as a point of view. The purpose of VP is to share different views about the IT related products and what individual think about that. [Limit 8 Pages]

5. Research Thought (RT) can refer to the opinion or arrangement of research ideas that effect from thinking, the act of producing thoughts on diverse interdisciplinary collaborative research areas or tools with which researcher can formulate it's research paper, choose a method for undertaking a study, write up for findings and discuss the outcomes in a discussion section. In this head author can throw a light on various research tools which can be helpful in formulating a research paper. [Limit 5 Pages]

6. Student Research Initiatives (SRI) is a research initiative by a grass-root researcher and technocrats. This head facilitate students/learners to pursue independent academic and imaginative effort and engage in research under the supervision of a faculty mentor with an intention to heighten student research as a means of collaborative learning, critical thinking and the establishment of knowledge. [Limit 12 Pages]

7. Dissertation Snapshot (DS) is an excerpt from a researcher's own thesis or dissertation which had been previously published or submitted in the form of research project or its own doctoral work. The rationale is to raise the curtain on an application and thought used by researcher in a brief manner with an intention to promote the future researchers to sequel their thoughts. [Limit 10 Pages]

8. Questionnaire Format (QF) A new philosophy called "Questionnaire Format" had been introduced, in which we are going to publish distinguish questionnaires that navigates the usefulness of it in building research and how to communicate with the respondents . The rationale behind introducing this QF is to give a glimpse about the structure and the pedagogy. QF on the other hand provides a niche to grass-root researcher about their various thoughts related to preliminary research and facilitate them in linking with a respective research papers which the researcher had visualize or going to plan in a coming future. This is a new inventiveness under the GJEIS Academic Social Responsibility(GASR) and would be complimentary/charitable in nature. [Limit 5 Pages]

9. Book Review (BR) is a form of literary criticism in which a book is analyzed based on content, style, and merit. BR can be a primary source opinion piece, summary review or scholarly review. Books can be reviewed for printed periodicals, magazines and newspapers, as school work, or for book websites on the internet. A book review's length may vary from a single paragraph to a substantial essay. Such a BR may evaluate the book on the basis of personal taste. Reviewers may use the occasion of a book review for a display of learning or to promulgate their own ideas on the topic of a fiction or non-fiction work. [Limit 3 Pages]

10. Biographical Note of the Luminary in an Area of IS We as per our culture acknowledge in every issue a great leader, Entrepreneur, Technocrats, Academician etc., who contribute a lot to a society in an area of IS. [Limit 2 Pages]

11. Great Enterprise Contribution to Society in Information System Perspectives deals with those enterprises contributing a lot to the society, and considering themselves a wizard in the field of Information System, we publish their profile, with the intention that their creation/contribution would be viewed and duly appreciated by the corporate and academics, all-around the globe. The purpose behind this is to broadcast the most visually powerful, immersive and engaging rich media applications on the Web. [Limit 2 Pages]

12. Award is something given to a person or a group of people to identify their fineness in a definite field especially in an area of EIS, it is rather a certificate of excellence for their contribution in academia or in a corporate world. This start throws a light on an entity or a gamut of researcher who had been honored for their extra ordinary input. [Limit 2 Pages]

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