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FROM THE DIRECTOR

The challenging mismatch between the educational system and the job skills employers are looking for is very evident as the enigma of rising unemployment and battle for talent continues. The education system churns millions of graduates but unfortunately many of them remain unemployed or at least start as unemployable till they somehow manage to get themselves skilled, thereby getting employed.

May be there really isn't a dearth of jobs as much as skills!

And that could be precisely why companies in order to stay competitive are forced to spend heavily on internal development programs through investing in corporate universities, onboarding programs, and the so called "continuous learning" programs. Many companies don't mind shelling almost an extra 22 % higher salary, it had they find the kind of skills they are looking for. As it is, employers too need "readymade" employees.

Why just India, educational institutions across the globe seem to be not in sync with the employer needs. And that could be precisely why there exists a mismatch in the perception of employers vis a vis educational institutions on the graduates. The employers feel not many graduates are ready for work, while the educational institutions believe that their students are employer ready! The need of the hour is a skilled workforce to match the evolving requirements of technology as well add further innovations to it.

The question however remains as to whether the students are given adequate exposure of industry as well the real life expectation arising therein in terms of salary, timings and mobility. Are we able to change the mindset of our students that knowledge earned from degree is not really sufficient to survive in corporate world? Does the evaluation pattern for the practical or project in the current curriculum look at parameters including quality, productivity and given time line as followed for a corporate job? Is it that the students value practicals less than theory as less weightage is apportioned to practicals as compared to theory in most of the institutions?

While it is evident that business managers, students and teachers realize that job training is an effective method to learn skills, most of the educational institutions still rely heavily on lectures as a method of teaching with "traditional online learning" being practiced in the other "for-profit" distance learning institutions.

Here vocational education appears to be an effective solution, but it has not much of perceived value amongst students. Traditional education is valued over vocational education in most of the countries except Germany. Here education is packed with apprentice-based programs, making Germany with the lowest unemployment rate in Europe. But vocational programs do not always seem to be an answer either, as many students are unsure about their choice of the institution and still many are uncertain about the choice of the program.

The students do not have a strong understanding of the skills, and degrees which might help them best crack a decent job is again a cause for concern as most of the students are unsure as to "what educational program" shall fetch them a good job? In fact there exists a whole segment of students who seem to have "given up" on their capability to leverage education to find a suitable employment.

As the online education providers experiment with new business models and impending technical disruptors EdX, Udacity, Futurelearn, it is time that the education industry in itself rethinks its model.

With organizations expecting employees to understand and imbibe company values and be result oriented, it is time that we prepare ourselves for the future of work. As more than one-third of the skills we believe are essential for the workforce today, will have changed five years down the line. We will be soon sharing our workplaces with artificial intelligence and bots and given this fast-paced technological innovations one needs to stay ahead of the curve.

What is required now is the focus on improving quality of education and collaboration with industries so that demand and supply gap is minimized. As is structure that plugs out the various gaps in the current educational system's capability to drive the required abilities as well enable bridging the gap and the emerging requirement of skills in the employees. There are numerous reasons to acquire a decent education, but nevertheless it has to ultimately provide a pathway to a promising and successful career.

Dr. Ashok Gupta
Director

EDITOR'S NOTE

Is HR towards the brink of a massive commotion? The bar of employee experience has been now redefined with the upcoming social technologies, ubiquity of mobile devices and personalization.

The compulsion towards a never ending culture of learning and growing has certainly not been more urgent with technology impacting the transformation of work and business models in almost all industries which in turn has changed the talent management game.

Amidst generally a declining budget and ongoing operational distractions the HR is now positioned at the intersection of all these demands. The bright side being just at this apposite moment, automation and AI are becoming handy for the professionals of HR. Pervasive talent issues such as knowing the skill inventory in hand, checking unsolicited employee attrition, retorting swiftly to employee hot spots, matching expectations of external candidates and employees with career opportunities, facilitating better salary investment guidance for managers, reducing routine and manual responsibilities in payroll and benefits administration by implementing process automation through robotics, and creating an irresistible platform for employees to learn on the go have been enabled

With certain ethical operational guidelines, up skilling and vigorous bout of technical inquisitiveness, AI shall enable HR to solve issues and position it to be a true driver of strategic advantage thereby enhancing support services to the workforce and putting strategy into action.

The current issue of OORJA brings as usual readings on an assortment of topics from impact of digital marketing channels, social entrepreneurship, performance analysis of blue chip companies to Higher education and sustainable development to name a few.

The book reviews on "Bad Choices, How Algorithms can help you think smarter and live happier" and "Restoring the soul of business Staying Human in age of data as ever give a beautiful taste of the books giving the best of reading experience to our readers.

As I sign off I look for many more contributions from our prospective authors, well-wishers and readers as we join hands to take OORJA to further heights.

Dr. Manju Nair
Editor-in-Chief

AN ANALYTICAL STUDY ON THE IMPACT OF DIGITAL MARKETING CHANNELS ON BUYING BEHAVIOUR OF ONLINE CUSTOMERS

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Abstract

The paper aims to explore the impact of digital marketing channels on the purchase decisions of online customers. It has been found that online companies use various forms of digital channels that allow or motivate consumer to purchase through online sources. The study conducted is empirical whereby the two factors on the digital channel; perceived usefulness, and ease of use were assessed amongst 138 online customers. The study found that perceived value and perceived ease of use of digital channels motivated the customers to buy from online sources considerably.

Key Words: Digital Marketing Channels, Buying Behavior, Online Customers.

Introduction

The use of digital media for marketing purposes has been on the rise, with an increasing number of companies using digital marketing to reach their target markets. This can be seen by the fact that around 77% of customers go online to check the reviews of the products, whereas a whopping 3 million advertisers are resorting to social media for reaching their customers with 93% of total online purchases being influenced by social media (Heitzman, 2017). These figures can be seen as an indication that digital marketing channels are the new way to go for the businesses.

The growth in online sales in India can be seen from the fact that the volume of the digital commerce market in India increased from $4.4 billion in 2010 to $17 billion in 2014 and reached $ 38 billion by 2016 (IBEF, 2017). The number of online shoppers is expected to have an exponential growth as it increased from 20 million in 2013 to 100 million in 2016, which can be attributed to the increase in sales of smartphones with mobile data (IBEF, 2017). The total digital commerce market in India is growing at a CAGR of 44.77 percent with the increasing growth in the penetration level of smartphones and internet and increased demand of the customers (Deloitte, 2016).

Objectives of the Study

The aim of this paper is to study the influence that digital marketing channels have on the purchase decision of online customers. This study shall focus on the growth of online sales, which have been made under the influence of digital marketing channels.

Literature Review

The review of literature is done briefly under three heads namely, theory of buying behavior to have a general understanding of the fundamental concept of buying behavior, followed by digital marketing channels and strategies and its effectiveness in the context of buying behavior and finally a few empirical research works on buying behavior which are described as follows:

Theory of Buying Behavior (online)

Online buying behavior is defined as, the study of understanding how the consumer makes a

decision about spending his/her limited resources, such as time, effort and money for purchasing"(Smith, 2011, p. 2). An examination of various theories of consumers' online buying behavior shows that the basic foundation of most of them was classical theories of Theory of reasoned action (TRA) and Technology Acceptance Model (TAM). TRA was formulated by IcekAjzen and Martin Fishbeinto in 1980 to explore the attitude based research and the difference between human attitudes and behaviors. The model states that the behavior of online customers cannot be regarded as completely voluntary and under control which led to the addition of perceived behavioral control(Khurana and Kaur, 2017).

TAM, on the other hand, was derived from the theory of reasoned action, which was formulated by Davis in 1986. The model implicates that the attitude to accept a particular system of information is based on two aspects; perceived usefulness and perceived ease of use. Perceived usefulness is the perseverance of human to consider that there is specific use or importance of the information system and perceived ease of use indicates simply the perseverance of the human on the thinking of how easy it is to use the system (Khurana and Kaur, 2017) Besides these two models, there is no other integrated, relevant and universally accepted consumer behavior model in existence.

About digital marketing channels and strategies and its effectiveness

There are various marketing channels and strategies, including website advertisements, YouTube videos, e-mail notifications and game based advertisements. Previous studies have shown that companies require doing online advertising in order to be effective in influencing consumer behavior. It was found that banner advertising was the most effective in capturing the attention of the buyers and ultimately leading to purchase (Goh and Chintagunta, 2010). However, the views of website based advertisements different from one person to another whereby they may also perceive it negatively (MccOy et al., 2012). Cho and Cheon, (2014) too supported the findings of MccOy et al., (2012) in which it was found that online advertising slows customers from achieving their personal goals or may even make them lazy. This factor and perceived excessive advertising issues may impact the consumers to avoid online advertising. Therefore, marketers need to alter their marketing strategies in order to adapt themselves to the requirements of the millennials that are more brand-conscious and therefore, respond different to advertisements as compared to their parents.

Empirical review

Karjaluoto, (2007) investigated the different factors that influenced the level of trust of the consumers in e-commerce model by dividing them into external factors and internal factors. The study found that trust was the main factor behind repeat purchase of customers which would eventually lead to long term buyer commitment.

Mukherjee, (2007) reinforced the role of trust and commitment of the sellers towards buyers in online space. The study mainly concentrated on finding out how the trust of the buyers could be gained by websites and at the same time, delivering the promises they made to them in order to culminate in longer relations with the customer. This paper also examined the commitment-trust theory (CTT) which is related to online retailing

Lim, (2012) sought to identify the perspectives and attitudes of online shopping by using the TAM model. There were four hypotheses based on the different factors of TAM and found a positive impact on the buying intention of the consumers. The main conclusion of the study indicated that in today's

world, digital consumers are accepting technology to make an informed decision regarding their purchase behavior.

METHODOLOGY

The methodology of the study of the research paper is described as follows:

Data Type and Sources

The study is based on both primary and secondary data; review of literature is based on the secondary data and the main research work to study the impact of digital marketing channels on the buying behavior of online customers is done based on primary data.

Sampling Plan, Sample Size, Questionnaire and Data Collection

The collection of data is done by the use of simple random sampling tool and a relevant questionnaire is prepared with respect to the objective of the study and administered on pilot sample of 32 and corrected and finalized the questionnaire and administered on 175 online customers and after the scrutiny of the collected data 138 respondents are taken as the final and effective sample size for analysis of the data.

Data Classification, Tabulation and Statistical Tools

The collected data is classified tabulated in one-variate to understand the profile of the online customers and also with respect to the objectives of the study, such as times of online purchase, digital methods use motivation cause, and digital marketing channels. The study of impact of digital marketing channels is analyzed by the use of regression, correlation and ANOVA.

Reliability Test

The reliability test was done to showcase the reliability of the responses provided by the respondents were true. In addition, the reliability test was also done to link the regression of the study will help in finding the impact of digital marketing channels on online purchase behavior. In this regard the independent variables of the studies were tested for Cronbach's alpha test with value of 0.934 for 15 items of perceived usefulness and ease of use.

    a)   Research hypotheses

The hypothesis framed to study the implications of the research is:

The strategies of digital marketing channels used by companies do not impact the online purchase behavior of customers in India. The strategies followed by the different online companies are:

- Digital channels showcase new products every time
- The digital stores have a wide range of brands and products
- Digital stores provide several types of discounts and benefits
- Digital channels allow comparison of two or more products
- Digital channels offer easy returns and replacements
- Digital channels enable easy referral to my friends and family
- Digital channels help in easy decision making for products
- These channels provide safe and secure payment options

- Digital channels provide notification on arrival of new products or price reduction of saved products
- Digital channels allow easy navigation for products
- Digital channels provide easy payment modes
- The platforms are user-friendly with loads of features
- Purchase through digital channels takes lesser time
- These platforms enable saving or wish listing products
- Digital channels can be used by both children and older people

  b) Limitations and assumptions of the research

  The following are the limitations and assumptions of the study:

- Effective sample size 138 may not be sufficient hence the results are subject to verification concerning the real market trend. However the research outcome is nearer to the real market trend.
- It is assumed that online marketers follow the above listed strategies to motivate and boost up the online sales.

FINDINGS

The following are the outcomes of the research:

Profile of the respondents

a) As per the **Figure 1**, it is observed that 73% of the sample respondents are females and the rest 27% of the sample respondents are male online buyers, implying female online buyers are far greater than that of males.

b) With respect to age, more number of online buyers are seen in the age group between 20 & 34 years (48.6%), followed by 35 to 54 years (26%), below 20 years (22.5%) and above 54 years (2.9%) implying that youngsters are more inclined to be online buyers.

c) Majority of the online buyers are seen with post-graduation as their educational qualification (37.7%) followed by the respondents with graduation as their educational qualification (31.2%) implying 69% of the online buyers are with minimum graduation.

d) Highest number of online buyers is seen in students segment (54.3%) followed by private sector employees (32.6%) and public sector employees account for just 2.2%. In other words students and private sector employees are the major online buyers.

e) In terms of spending, it is observed that 51.4% of the respondents normally spend between 1000 and 5000 INR at a time, followed by 37% of the respondents do spend more than 5000 INR and 11.6% of the sample online buyers spend below 1000 INR on an average.
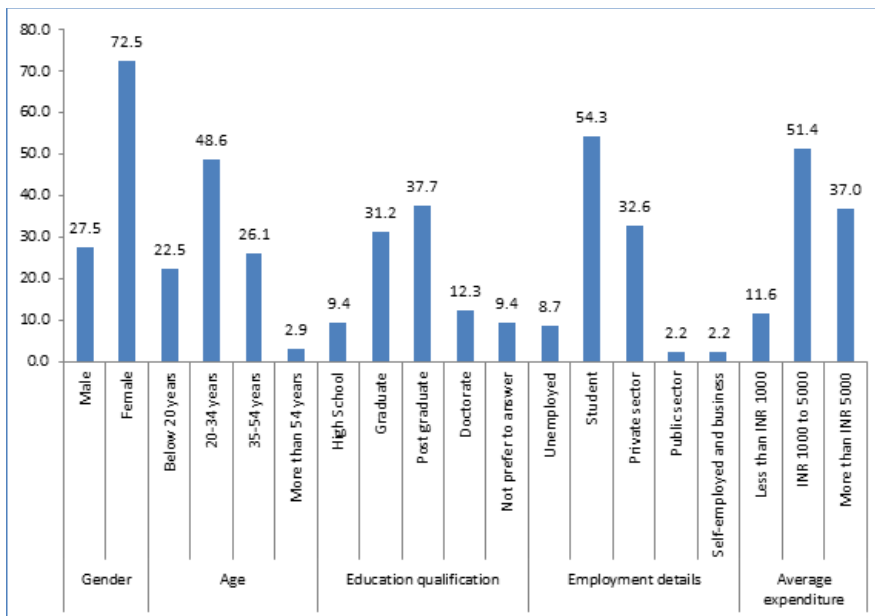
Source: Authors' survey

Figure 1: Demographic profile of the Respondents

The frequency of online purchases, the use of digital methods, cause to buy online and the use of digital channels to buy online are analyzed and presented in **Figure 2.**

a) Daily online buying is dominating and represented by 41% of the sample online buyers followed by 20% who buy online multiple times in a month, 17.4% who buy multiple times in a week implying that major online buyers are daily online buyers.

b) As for as the use of applications for online buying, majority of the sample online buyers found to use mobile applications (29.7%), followed by instant messaging by 20.3%, social media and e-mail each by 12%, web site ads by 10.9% and Television programs by 5.1%. This implies that most of the online buyers are using mobile applications.

c) Factors that determine to boost up online buying are analyzed. As per the **Table-1** it is observed that customer experience and ease of purchase (31%) and choice of products and customer service (30%) were found to be the most important reasons to motivate customers to purchase products online and followed by discounts and royalty points by 26.8% implying that online buying can be boosted up by providing user-friendly software to increase ease of purchase experience for the customer, providing a good choice of products with discounts and accumulated loyalty points.

d) With respect to the digital channels, it is found that majority of the sample respondents prefer Google search by 36% followed by blogging and content by 23.9%, mobile notifications by 19.6% and television and podcasts by 10.1%. This implies that digital marketers to focus on Google search and blogging and content writing to attract online buyers.

Figure 2: Preferences of the Respondents

Inferential analysis

The main aim of this study is to assess the effect of various digital marketing channels on online buying behavior of consumers. In this regard, perceived usefulness and perceived ease of use are analyzed. H_0: The strategies of digital marketing channels used by companies do not impact the online purchase behavior of customers.

Correlation Test

Correlation tests are done to assess the relation of closeness between the responses provided during a survey. In this regard, a Pearson correlation was calculated and the analysis has been presented in **Table 1.**

With respect to perceived usefulness, it was found that 'Digital channels showcase new products every time' showed high value of correlation of above 0.644 followed by 'The digital stores have a wide range of brands and products' at 0.617 at 95% confidence interval and a significance value of 0.000 (<0.05). However, it was also found that, strategies like 'Digital channels provide easy returns and replacements' too indicated a high value of correlation of 0.712 at 95% confidence interval and a significance value of 0.000. Again, with respect to ease of usage, factors like 'Digital channels can be used by both children and older people', 'These platforms allow saving or wish listing products', 'Digital channels provide ease payment modes' and 'Digital channels allows easy navigation for products' were found to have a high Pearson correlation of more than 0.600 at 95% confidence interval and a significance value of 0.000 (<0.05). In this regard, it may be implied that the digital channels used by companies lead the online customers to purchase products.

Table 1: Correlation Analysis

FACTORS	Pearson Correlation Test N = 138	Dependent User experience
Digital channels showcase new products every time	Pearson Correlation	.644**
	Sig. (2-tailed)	.000
The digital stores have a wide range of brands and products	Pearson Correlation	.617**
	Sig. (2-tailed)	.000
Digital stores provides several types of discounts and benefits	Pearson Correlation	.386**
	Sig. (2-tailed)	.000
Digital channels allow comparison of two or more products	Pearson Correlation	.537**
	Sig. (2-tailed)	.000
Digital channels provide easy returns and replacements	Pearson Correlation	.712**
	Sig. (2-tailed)	.000
Digital channels allow easy referral to my friends and family	Pearson Correlation	.561**
	Sig. (2-tailed)	.000
Digital channels help in easy decision making for products	Pearson Correlation	.661**
	Sig. (2-tailed)	.000
These channels provide safe and secured payment options	Pearson Correlation	.490**
	Sig. (2-tailed)	.000
Digital channels provide notification on arrival new products or price reduction of saved products	Pearson Correlation	.572**
	Sig. (2-tailed)	.000
Digital channels allows easy navigation for products	Pearson Correlation	.635**
	Sig. (2-tailed)	.000
Digital channels provide ease payment modes	Pearson Correlation	.710**
	Sig. (2-tailed)	.000
The platforms are user friendly with loads of features	Pearson Correlation	.680**
	Sig. (2-tailed)	.000
Purchase through digital channels takes lesser time	Pearson Correlation	.665**
	Sig. (2-tailed)	.000
These platforms allow saving or wish listing products	Pearson Correlation	.570**
	Sig. (2-tailed)	.000
Digital channels can be used by both children and older people	Pearson Correlation	.731**
	Sig. (2-tailed)	.000

Source: Authors' Survey

ANOVA and Regression Test

ANOVA test was conducted to address the hypothesis of the study. ANOVA helped to find the differences amongst the responses for the perceived usefulness and ease of use of the digital channels shows the significance of the hypothesis. The results from the ANOVA have been presented in **Table 2**. The value of R square was found to be 0.860, which signifies that 86% of the data gathered lie on the regression line. In other words, 86% of the customers using online modes believe that the independent variables have an impact on the dependent variables. Similarly, the adjusted r square was also found to be high and 84.2% of the total respondents believe or perceive that digital channels have positive usefulness and ease of use and hence motivate to buy online. Since, majority of the responses appear to greater than the mean regression point at 0.842, the null hypothesis may be rejected and the alternative hypothesis may be accepted. Therefore, the regression coefficient is significant and can be inferred that the channels of digital marketing impacts the online purchase behavior.

Table 2: ANOVA Statistics

R	R Square	Adjusted R Square	F value	Sig.
.927	.860	.842	49.785	.000

Regression coefficient

The results from the analysis have been presented in **Table 3**. The table also highlights the independent variables that show values less than 0.05. From the assessment of regression it was found that 8 out of 15 factors from perceived usefulness and ease of use have significant values of p<0.05. In case of usefulness 'Digital stores provides several types of discounts and benefits' (p=.035, 95% CI), 'The digital stores have a wide range of brands and products' (p=.002, 95%), 'Digital channels provide easy returns and replacements' (p=.001, 95%), and 'These channels provide safe and secured payment options' (p=.010, 95%) were found significant and impact the impulse purchase behavior amongst the online customers. Again, in case of ease of use based strategies, factors 'Digital channels allows easy navigation for products' (p=.000, 95%), 'Digital channels provide ease payment modes' (p=.043, 95%) and 'Digital channels provide ease payment modes' (p=.015, 95%) were found to influence the customers to make online purchases.

From the findings of the statistics it can now be implied that the null hypothesis can be rejected as the p-value is less that 0.05 at 95% CI. Therefore, the null hypothesis strategies of digital marketing channels used by companies do not impact the online purchase behavior of customers is rejected. The alternative hypothesis is accepted that, digital marketing channels used have significant impact on the online purchase behavior of customers.

Table 3: Regression Analysis

FACTORS	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Digital channels showcase new products every time	.107	.055	.112	1.938	.055
The digital stores have a wide range of brands and products	.089	.042	.104	2.138	.035
Digital stores provides several types of discounts and benefits	-.161	.052	-.179	-3.110	.002
Digital channels allow comparison of two or more products	-.079	.055	-.080	-1.440	.153
Digital channels provide easy returns and replacements	.173	.053	.180	3.301	.001
Digital channels allow easy referral to my friends and family	-.004	.047	-.004	-.085	.932
Digital channels help in easy decision making for products	.080	.052	.089	1.530	.129
These channels provide safe and secured payment options	-.142	.054	-.151	-2.614	.010
Digital channels provide notification on arrival new products or price reduction of saved products	.175	.050	.186	3.522	.001
Digital channels allows easy navigation for products	.222	.058	.233	3.795	.000
Digital channels provide ease payment modes	.121	.059	.125	2.045	.043
The platforms are user friendly with loads of features	.091	.058	.096	1.576	.118
Purchase through digital channels takes lesser time	.088	.055	.092	1.619	.108
These platforms allow saving or wish listing products	.077	.042	.084	1.808	.073
Digital channels can be used by both children and older people	.271	.047	.283	5.737	.000

Source: Authors' Survey

Implications of the Research

The study finds that young aged and self-dependent financial status of customers increases the possibility to purchase products. In addition the study also finds that majority of the companies use digital channels like social media advertisements and SEO search engines to lure customers to buy products online. Further, content marketing and blogging also motivates the customers to choose and buy products from online sources.

Statistical findings indicate that majority of the online customers who make purchases from online websites spends around INR 2000 and more every month. Again, students and employed customers between the ages of 20-34 years spend the highest on online shopping. Therefore, age and financial status both plays their part in online shopping and impulse buying behavior. Based on the usefulness factors, it was found that digital channels showcase new products every time, had a wide range of brands and products, several types of discounts and benefits, easy returns and replacements, easy decision making for products and provide safe and secured payment options have positive and significant impact on online buying.

Therefore, it can be inferred that the employed youth make the most amount of online purchases, and are prone to indulge in impulsive buying. However, the acceptance of technology is important to motivate the customers. Literatures also found that trust was the main factor behind repeat purchase of customers which would eventually lead to long term buyer commitment. In addition to use of different factors, TAM found a positive impact on the buying intention of the consumers. Therefore, digital consumers were accepting technology in order to make an informed decision regarding their purchase behavior.

Recommended Marketing Strategies

The following marketing strategies to improve and digital marketing space across the country:

a) Product-mix Strategies

The following are product-mix strategies:

i) Vast portfolio of products and services to maximize the choice for the online customers and therefore availability of superior products and services does not have a dramatic impact on consumer e-satisfaction.

ii) Attractive website design and layout to attract the customers and create feel good factor

iii) More and quality of information and extent of information available determines consumers' inclination toward an e-commerce site

iv) Good brand image of the web site Brand image is important in order for a consumer to consider shopping online.

v) Ease of use of the website also determines consumers' inclination toward an e-commerce site

b) Price-mix strategies

The following are price-mix strategies:

i) Competitive pricing to attract the customers from traditional and physical shopping to digital shopping.

ii) Different payment options such as through credit card, debit card, net banking, UPI, wallet, Cash on Delivery etc to create convenience to the customer.

iii) Terms and conditions of sales should be simple and easy to understand easy-return policy is important in developing trust in such a buying environment.

iv) Security of payment during transaction is crucial in determining consumer trust.

c) Promotion-mix strategies

The following are promotion-mix strategies:

i) Eye-catching graphics for more visibility and clarity to make the customer feel good about the company and its products

ii) Huge discounts and promotional offers more transactions through their websites

iii) Effectiveness of search process in terms of speed and accuracy definitely is significant in selecting a web portal.

iv) Easy access to the portal and portal with faster navigation will boost up the acceptance of digital marketing.

d) Place-mix Strategies

The following are place-mix strategies:

i) On-time and proper delivery of goods has a significant and positive impact on online customer satisfaction.

ii) Privacy of personal information as privacy is an important factor in determining a shopper's inclination to visit a website or not.

iii) Delivery of quality products an important factor in determining consumer e-satisfaction.

iv) Physical display counter can influence consumers to visit the site.

v) Online and offline interaction can lead to a better relationship with the customer.

vi) Personalized features for the existing customers

Scope for Future Research

The following are the topics listed for future research:

a) A comparative study on the determinants of buyer behavior between online buyer and traditional buyer.

b) A comparative study on the determinants of online buyer behavior between urban and rural buyers.

c) An analytical study on the digital marketing strategies for health care products.

d) An analytical study on impact of digital marketing strategies on medical doctors' prescription behavior.

e) An analytical study on impact of digital marketing on the sale of costly branded jewelry products.

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A STUDY ON THE ROLE OF SOCIAL ENTREPRENEURSHIP IN SOCIO-ECONOMIC DEVELOPMENT OF RURAL KARNATAKA

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Abstract

Though entrepreneurship in any form is the foundation of economic development, social entrepreneurship provides additional benefits in the form of societal development. In developing economies like India, the growth of social entrepreneurship at a fast phase has created ample benefits for the society in the form of multiple employment opportunities, improvement in education, health, and infrastructure and so on. The government support for social entrepreneurship can be seen in the form of provision of subsidies, awards, and recognition to the social entrepreneurs to include the community in the new business plans. In this regard, the present study aims to examine the impact of social entrepreneurship in socio- economic development of rural areas in Karnataka. The researcher collected the data through a close-ended questionnaire from 321 respondents residing in the rural areas of Karnataka. The findings of the study indicate indulging social entrepreneurs' knowledge in the health and education sector can build strength within the existing system for a positive change.

Keywords*:* Social Entrepreneurship, Social Needs, Innovation, Social Entrepreneurship, Standard of Living, Health.

Introduction

Social entrepreneurship has emerged as an approach which would bridge the gap between profit-making enterprises and non-profit organizations struggling with maintaining economic sustain ability and achieving the developmental goals of the society (Gupta, 2012). These social enterprises could merge in the form of public/private companies or non-governmental organizations that attempt to uplift the people at the bottom of the pyramid by bringing them into the development process (Singh N., 2015). This is done by ensuring an improvement in the quality of life, enhancing the skills, capabilities and bringing in innovation within the mainstream development. Social entrepreneurship has specifically focused on catering the needs of the poor strata of the society by enabling production and sale of affordable products and services. This has contributed in overall socio economic development of the economy (Slađana Brajević, Antonija Babić & Ivona Jukić, 2015). In the context of India, where the government faces a tradeoff to invest either in economic growth or social development, social entrepreneurship has helped in maintaining the balance between the two (Singh D. P., 2012).

In the past few years, India has offered a progressive environment for the growth of social entrepreneurship firms. This is achieved through the support offered by the government in the form of greater access to finance and improved legal structure (Oommen, 2010). The self-help groups have also offered facilities in the form of microfinance to these enterprises due to which social entrepreneurship is witnessing an upward trend in India. However, the progressive growth of social

entrepreneurship is inconsistent and unequally distributed across the geographical boundaries of India(Rawal, 2018).

Among several Indian states, only Karnataka has emerged as a global IT hub. Social entrepreneurs have utilized this opportunity by setting up firms in the rural areas of Karnataka with a mission to achieve socio-economic development. Some of the known social entrepreneurs in Karnataka include Santosh Kaveri, developed the brake system for bullock carts, carrot cleaning machines and hot water without the geyser system. This has helped the farming population of not only Karnataka but India by easing out the lengthy processes and giving them time and energy to divert into other important activities which would fetch them money and raise their living standards (Pareek, 2014). However, these ventures are facing challenges such as lack of education related to entrepreneurship, lack of financial assistance, lack of skilled manpower and lack of subsidies for social ventures(Oommen, 2010).

Objectives of the Research

The aim of the paper is to examine the impact of social entrepreneurship in socio- economic development of rural areas in Karnataka. The following are the sub objectives:

- To analyze the social changes that has been brought by social entrepreneurs in rural Karnataka.
- To examine the economic development that have occurred due to the emergence of social entrepreneurs in rural Karnataka.

Literature Review

The review of literature on social entrepreneurship is done under five categories; research works related to:

a)   Papers published on social entrepreneurial characteristics to understand the characteristics of social entrepreneurs,

b)   Articles related to the outcome of social entrepreneurship,

c)   Papers related to strategies of social entrepreneurship that were executed

d)   Papers related to impact on socio-economic development

e)   Empirical papers on social entrepreneurship

Characteristics of Social Entrepreneurship

Social entrepreneurship is not defined completely but is understood as something that creates social value (Öztürk, 2018). Examples of pioneers are always given when social entrepreneurship as a concept comes up. It is defined in as an business that is not interested in much profit and is rather interested in bringing change in the society (Braunerhjelm and Hamilton, 2012). The concept has not yet been linked completely with the phenomenon of entrepreneurship and knowledge. The social entrepreneurs act as agents of change without burdening the Government since they are self-sustaining bodies (Abu-Saifan, 2012).

Outcome of Social Entrepreneurship in Rural Areas

Social entrepreneurship in the rural areas have helped in the eradication of health, poverty and

educational issues rural India faces (Patel and Chavda, 2013). In this regard, the study of (S.Moghana Lavanya, 2014) highlighted that social entrepreneurship has helped in providing quality educational infrastructure at both schools and college levels for the students in the rural areas. In addition to this, these firms have assisted in technological advancement in the field of agriculture and industry. This technological advancement has generated employment opportunities for the youth in the rural areas that have no means to earn a good-paying job (Mair, 2009). Further, these entrepreneurs are working to bring transformation in the health sector in order to make it affordable for the rural population who can't pay for big and expensive surgeries. Lastly, improvement in the health sector has also been witnessed by addressing the issue of sanitation in the rural areas (Gupta, 2012).

Strategies of Social Entrepreneurship

Through the use of a social network approach, innovative ideas are brought about by social enterprises to establish business in rural areas (Richter, 2017). In this regard, the study of (Smith and Darko, 2014) stated that social entrepreneurs are expected to finance on their own while they support social causes so that they can work independently. They ensure finances through methods like crowd-funding wherein some people come together in a community to pool their financial resources and help each member by lending money pooled to the needy individual.

In order to stand out in the rising social entrepreneurial environment, businesses focus on the impact made on the community. They do this by analyzing the needs of the targeted population. In this context, the study of (Garton, 2015) focused upon the view that that business enterprise in order to stand for the same cause which the community is wishing for, aligns with social enterprises and this opportunity is utilized by social entrepreneurs for generating funds.

Impact on Socio-economic Development

Social entrepreneurs address social issues like illiteracy, poverty, sanitation etc., by applying business skills on them (Kumar and Naveen, 2016). In this context, the study of Binger, (2004) stated that the entrepreneurs are able to capture the resources which are available locally in rural areas and build opportunities in the community. In addition to this, they function in by developing a product which caters to the social needs like poverty eradication of the people in that area. The businesses are able to address the economic needs of the community as well by providing employment to help the people in the society in raising their standard of living (Tripda Rawal, 2018).

In the socio-economic development, the study of (Samineni, 2018) focused upon the extent of women empowerment in India. The study highlighted that initiatives like the Deccan Development Society in Medak district in Telengana and *'Our Seeds our Power'* have empowered women in the field of organic farming. The ventures are providing platform to these women to come together by sharing their funds and create something new for their economic up-liftment

Empirical Review

The studies so far on social entrepreneurship have included case-based studies, literature reviews and surveys. The studies however in rural India based on surveys and in general have been very limited. The following **Table 1** gives out a brief on some selective studies relating to social entrepreneurship in rural areas of India.

Table: 1 Brief on Some Selective Studies Relating to Social Entrepreneurship In Rural Areas of India

S No.	Author	Aim of the Study	Methodology	Findings
1	(Mair, 2009)	To examine the impact of growth in social entrepreneurship on women empowerment.	Case study on RHEP initiated by Gram Vikas NGO in Orissa's rural districts	Institutional change is witnessed in the power play between men and women where major responsibilities and decisions were taken up by both the genders together.
2	(Samineni, 2018)	To study and understand the strategies for enhancing women's economic empowerment through Social Entrepreneurship.	Focused Group discussion and Interviews of Women working with the social entrepreneurs.	The approach of Self-help groups or co-operative funding has made these entrepreneurs successful. Women are able to uplift their social and economic status in the community by serving as bread earners of the family.
3	(Raju, 2018)	To highlight an exemplary social entrepreneurship business which has created so much impact in the lives of rural population in India	Case Study on Srikiran institute of Ophthalmology	Entrepreneurship ventures like the case study would ensure sustainability, accessibility and viability of projects in rural areas.
4	(Tripda Rawal, 2018)	To study the overall contribution of social entrepreneurship and the challenges faced by them in India.	Hypothesis testing based on reports and published material on social enterprises available on the web, in journals and on known portals like ASSOCHAM etc.	Social entrepreneur is a coming up concept in India, there are some success stories which act as role models. There are hindrances like arranging financing to operate, making business profitable alongside helping the community.

Source: The compilation was done by the authors of the paper

Methodology

The research methodology of the research work is presented as follows:

Data Type

The study involves collecting primary data analysis of the people in rural Karnataka. This is done keeping in view the performance of Karnataka in terms of contribution for the development of the Indian economy. The state is known to contribute very high in GDP, with new ideas and innovations and startups emerging from here.

Sampling Method

In the present study, the researcher has applied purposive sampling. It is a type of non-probability wherein the elements that best fit the purpose of the study are chosen, based on the objectives of the study (Singh S. , 2018). This study has targeted the rural population of Karnataka where social entrepreneurs exist so that information can be collected as to how these ventures are affecting the socio economic development in those areas.

Sample size

The researcher approached 500 people living in the rural areas of Karnataka from each of the 5 villages out of which about 450 responses were received. After the process of cleaning of data the researcher found 321 completely filled questionnaires. Thus the sample size for the present study is 321 respondents. This sample size was calculated by considering the confidence level of 95 % and the confidence interval of 1.98.

Data Collection and Analysis Methods

The data was collected by the way of market surveys wherein the rural places of Karnataka famous for their entrepreneurial ventures were surveyed to find out how these ventures are helping the society or the residents of that area. The social entrepreneurships targeted in the study are concerned with providing; educational facilities for the children in rural Karnataka. In addition to this, the researcher approached the social entrepreneurs who have opened up health centers and agricultural centers for farmers in rural Karnataka. The data was collected with the help of a closed ended questionnaire which was handed over to the people in the rural community of the locality. The questionnaire was used to examine the perspective of the rural population as to whether they feel the entrepreneurial efforts are creating a change in their lives and if so in what ways has these ventures been impactful. The data collected from the respondents was entered in MS Excel which was further imported in SPSSv21 software to get the results for further interpretations.

Null and Alternate Hypothesis

In consideration to the aim and objectives of the study the researcher has framed the following hypothesis:-

H_0:- *There is no significant impact of initiatives undertaken by the social entrepreneurial ventures on the socio economic development in the rural areas of Karnataka.*

H_A: -*There is a significant impact of initiatives undertaken by social entrepreneurial ventures on the socio economic development in the rural areas of Karnataka.*
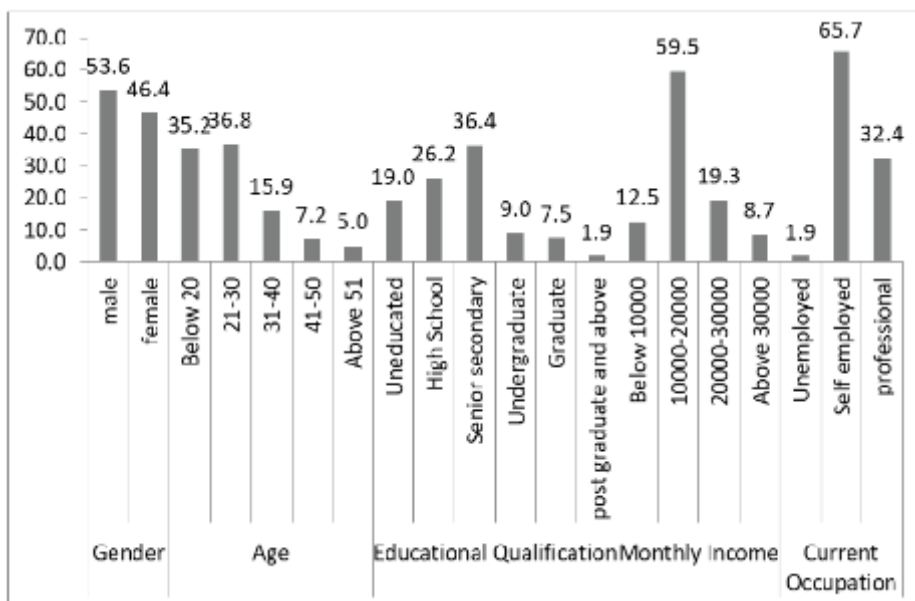
Data Analysis

Figure 1: Demographic Profile (%)

Primarily, the respondents were inquired about the basic details such as gender, age, monthly income and the current occupation. In this context, the **Figure 1** shown above clearly indicates that among the 321 respondents about 54% were males and the rest were females. Additionally, about 36 % respondents fell in the age group of 21-30 years. In terms of educational qualification, about 36 % respondents had completed their senior secondary. Further, about 60% respondents were earning the monthly income between Rs 10,000-20,000. Lastly in terms of current occupation, majorly about 65% respondents were self-employed. Overall, it can be said that there was not much difference in the number of male and female respondents. Though the respondents were young but were much educated. Apart from this, most of the respondents were self-employed and earned a low level of income.

General Background

Following this, the respondents were inquired about their awareness and participation in context to activities undertaken by the social entrepreneurs. **Figure 2** indicates about 79% were aware of the activities undertaken by social entrepreneurship firms. In addition to this, majorly 81.9% were aware of the social entrepreneurship firms operating in their locality. Further, 70% agreed to the fact that they have participated in the activities or initiatives undertaken by social entrepreneurship firms. Therefore, most of the respondents were aware of the concept of social entrepreneurship and knew of such ventures operating in their locality. They had also participated in the activities organized by social entrepreneurs.
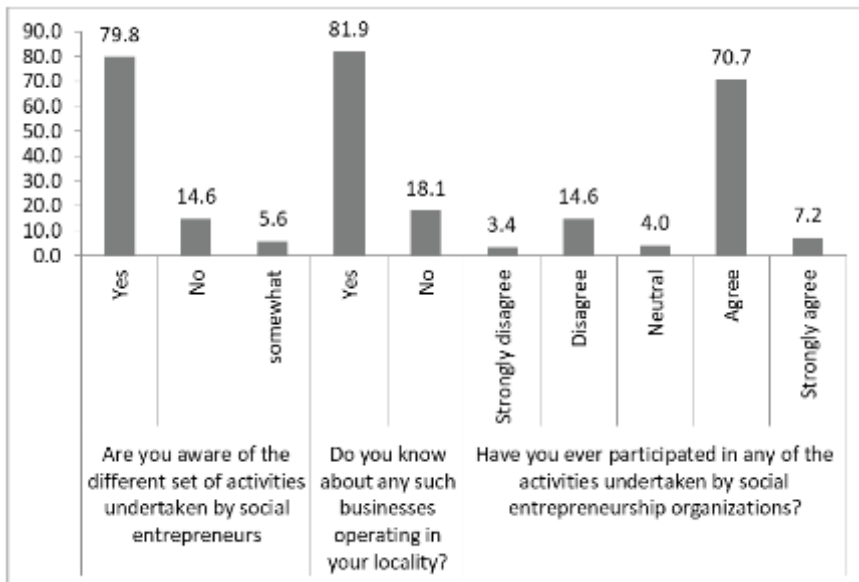
Figure 2: General Background (%)

Inferential Analysis

The aim of the study was to examine the impact of social entrepreneurship on socio- economic development of rural areas in Karnataka. Within these two objectives for defining primary study was to analyze the social changes that has been brought by social entrepreneurs in rural Karnataka and to examine the economic development that has occurred due to the emergence of social entrepreneurs in rural Karnataka. In accordance with the main aim, the researcher identified social-economic development as the dependent variable and initiatives undertaken by the social entrepreneurs such as education, resource development, cultural environment, social environment, employment opportunities, health, community infrastructure, living standard, innovation, poverty eradication and gender equality as independent variables.

H_0:- There is no significant impact initiatives undertaken by social entrepreneurial ventures on the socio economic development in the rural areas of Karnataka.

Correlation Analysis

Pearson Correlation was used to examine the relationship between initiatives undertaken by the social entrepreneurship and socio-economic development in rural areas of Karnataka. In this context, table1 shown in the Appendix of the study indicates that all the socio-economic factors are positively related to social entrepreneurship but the most strongly correlated factor is '*Education* (.968** sig at .000) and *Health* (.959** sig at .000)'. This means that social responsibility of education undertaken by the social entrepreneurs have a major impact on the socio-economic development of the country. In this context, the study of (Dubey, 2019)highlighted that the social entrepreneurship firms are working upon improving the health and education facilities across India. The entry of social entrepreneur's in these sectors would develop a high growth potential of these sectors in the near

future.

Regression Analysis

The table 2 in the appendix highlight the results of the ANOVA table makes it clear that the null hypothesis i.e., there is no significant impact of socio-economic development in rural areas of Karnataka due to social entrepreneurship is rejected since the F-value is significant at $p < 0.05$. In addition to this, the F value is too high (1168.038). Hence, the probability of accepting the alternative hypothesis is high.

Table 3 in the appendix, indicates that the value of R- square and adjusted R-square value is about 97 %. This shows that the independent variables contribute to a variation of around 97% in the dependent variable. Therefore, the model seems good enough to explain variation in social-economic development in rural areas of Karnataka.

Lastly table 4 in the appendix shows the regression analysis for the study. It can be seen that all variables are significant at $p < 0.05$ except for Eradication of Poverty and standard of living. '*Health*', out of all significant factors, depicted a major impact on social entrepreneurship with the highest standardized beta coefficient of .293. This indicates that health initiatives undertaken by social entrepreneurs have a major impact on socio-economic development in rural areas of Karnataka. In this context, the study of (Ajaikumar, 2018) highlighted that social entrepreneurship have helped in bringing in new technologies and investments in the healthcare sector with the support of other smaller organizations. This has brought in tremendous improvement in the healthcare sector of India. The results of the analysis part are shown in the table below:-

Table 2: Result of the Analysis

Hypothesis	Results
H₀:- There is no significant impact of initiatives undertaken by the social entrepreneurial ventures on the socio economic development in the rural areas of Karnataka.	Rejected
Hₐ: There is significant impact of initiatives undertaken by the social entrepreneurial ventures on the socio economic development in the rural areas of Karnataka.	Accepted

Conclusion

Social entrepreneurship is a concept which is coming up in the current era because of the realization that personal gains by businesses can be merged with benefit for the society so that overall development of the economy can be achieved. The findings of the study indicated that the social entrepreneurs have played an important role in improving the health and education conditions in the rural areas of Karnataka. The social entrepreneurs can build up staring networks with the other small organizations to tackle the health inequalities prevailing in the rural area. Further, initiatives in regard to education can fill up the loopholes existing in the form of poor quality of facilities like infrastructure in the government schools. Education not only develops the skills and capabilities of the people but also develop a long term path for the economic growth of the country.

Recommendation

Aforementioned results indicate few recommendations for achieving socio-economic through the activities undertaken by the social entrepreneurship firms as follows: -

1. Social entrepreneurship as a course should be taught to students at schools of entire

Karnataka state. It should be made part of the course curriculum. Institutions at graduate level should also offer courses in the social entrepreneurship so that youngsters come with useful and sustainable business solutions to support the society especially rural Karnataka.

2.   The reach of social entrepreneurship ventures should expand even to cover rural Karnataka. In India, such businesses are coming up only in some parts of the country. Awareness programs should be spread among the masses about the functioning of social entrepreneurs in the nuke and corner of Karnataka State, what it stands for and how is the concept different from the working of institutions which run for nonprofit objectives or for social benefit in rural Karnataka so that people in those areas can join these businesses to earn for their better living. This will also ensure addressable of their social problems apart from economic issues.

3.   Karnataka Government can reduce the burden of social entrepreneurs by providing access to the funds and reducing the legal barriers that these firms face during their formation. This will ensure development of the areas at a fast pace as the social entrepreneurs bring in sophisticated technologies which are helpful in addressing the issues in an area more efficiently than the technology or infrastructure invested by government organizations.

4.   The Karnataka Government should encourage the higher educational institutions to offer Agripreneurship courses as part of graduation courses and such graduates be provided all types of assistance (finance/technology/training) to start their startups to support Karnataka State farmers in creation of value addition for the agricultural crops and hence the graduated youth and farmers be benefitted thereby the suicidal cases among the Karnataka farmers be jeopardized.

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MICROFINANCE FOR MICRO, SMALL AND MEDIUM-SIZED ENTERPRISES IN JAIPUR, RAJASTHAN: SOURCES AND CHALLENGES

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Abstract

Microfinance is not a new concept in this modern world. The concept of microfinance started emerging in the late 90s. Microfinance is a powerful tool which is helping economically backward people by not only providing them with income-generating activities but also bringing a positive change in their lives. Often, cases and studies related to microfinance has shown that it is benefitting people by providing them opportunities and making them self-reliant.

Micro, small and medium enterprises sector plays an imperative function in the local & societal economic progress and employment creation. In Rajasthan, the Government is assisting Micro, Small and Medium-Sized Enterprises while developing strategies to meet the challenges in dynamic and competitive global business environment. In spite of these plans and schemes, the Jaipur MSME sector is unsustainable owing to numeral troubles such as lack of approachability to microfinance institutions and products. Exploring the sources and challenges faced by Jaipur's MSMEs in accessing microfinance forms the basis of this research paper. A survey research methodology is taken up, selecting a sample of MSMEs, and collecting the primary and secondary data from them via questionnaires and interviews. The data is analysed using SPSS Statistics. It is evident from the data collected, that owing to elevated operation overheads, unavailability of collaterals, insufficient skills in organizing the emergent banking projects, the economic sector has been unsuccessful in extending microfinance services to the MSMEs adequately. In conclusion, wherever default-risk of payment is supposed to be high, micro finance should be taken by applicants as collateral. The research paper recommends that few intervention policies must be initiated to streamline microfinance accessibility and work towards MSMEs sustainability.

Keywords: Micro, Small and Medium Enterprises, Source of finance to MSMEs, Microfinance Accessibility, MFIs

Introduction

In India banking and non-banking both gives the microfinance facilities. Its main objective is to bring out the poverty from the people living in rural areas and improving their way of living or standard of living. They target only those sectors in the economy who are needy and are jobless, or who wants to start with something new and of their own. The people belonging to the lower section of the society needs financial support from some or the other so as to start with something but he or she does not have any collateral to mortgage so he or she does not get easy access to the loans or finance by the banks or nonbanking institutions here starts the work of the microfinance institution they provide loan facilities to the poor without any collateral securities. Most of the people in India are dependent on agricultural sector of the country. They are a low income earners of the society they do not have much with them to buy the land on which they could practice agriculture thus they have to depend on the

landlords who actually exploit them and charge them a lot for such kind of people micro finance is beneficial. The main aim of the microfinance institution in India is to promote low wage earners and to eradicate the poverty from the country to the maximum.

The rationale behind specifying priority sectors to banking and financial institutions is to empower underserved sections of society that are denied access to credit, despite being creditworthy, and provide them better access to economic opportunities. Even though they may have access to some amount of credit from unorganised sources or even formal banking institutions, it is usually not adequate when compared to the actual capital they require to grow and scale up.

MSME units are generally being ignored by banks and financial institutions which typically supports giant borrowers. As a result, sectors that deserve bank credit get excluded, which not only creates a massive demand-supply gap, but also hinders long-term economic growth and job creation.

Since the establishment of MSME's in India, this sector has contributed a lot to the overall development of the economy and its growth. It has also let to the industrialization of India's rural sector and has provided employment at large. At the same time, the sector has played a vital role in reducing the imbalances that exist between regions that are closer to major urban economic centres and those that aren't. Employing several individuals with specific skills and using minimum technology and simple manufacturing processes, the revenues earned by these units are distributed equitably among all participants. This has helped in ensuring a more equitable distribution of national income and wealth among industrialised rural regions, as compared to those that are more dependent on agricultural income.

However, India has several clusters of artisans in various parts of the country. These micro units operating in unorganised sectors have limited access to credit or information about market conditions. Access to credit as well as banking services and products from the formal, mainstream institutions can help these units to scale and grow substantially.

Theoretically, it is recognized that the MSMEs segment plays an imperative function in the local & societal economic progress and employment formation. This sector, often driven by individual creativity and innovation, is a nursery of entrepreneurship. The 1.3 million MSMEs play a crucial role in creating jobs, especially low-skilled ones resulting in the employment of close to 40% of India's workforce. They account for 45% of India's manufacturing output and 40% of the total exports, thereby contributing 17% to the country's GDP. Thus, MSMEs are important for the national objectives of inclusive growth i.e. growth with equity and inclusion. The economic development of many countries around the world had MSMEs as a major contributing factor.

Statement of the Problem

Low outreach of microfinance institutions to various underdeveloped and developing areas is posing serious threat towards the development of the economy to its fullest. Various poor people who want to take advantage of the facilities of loan through microfinance fails because they do not have proper security against loan. Also, the number of people who are taking loan from microfinance institutions are utilizing the amount primarily for agricultural purpose and than for any other purpose. The main reason for this is lack of education, lack of proper institutions & unawareness among the people in the rural areas. The few out of many beneficiaries who are taking advantage of loan are definitely benefitted by this. Hence, here comes the need arise to educate people to utilize the loan from

microfinance towards the upliftment of the individual and the society as a whole.

Review of Literature

Based on a number of different questions related to Micro & Small Enterprises, Sudan, F.K. (2005) was able to describe the challenges in development and policy issues of Micro, Small and Medium Enterprises. The study briefed about the significance, positive aspects, problems and guiding principle options of the MSME Sector, concluding that GOI opted the entire guiding principle in an effort to create a dynamic SME sector so as to provide a diversified economy thereby expanding employment opportunities to offer exciting career opportunities and absorb all new labour force. The main objective of C. B. Rathod's study (2007) was to recognize the causes of success and failures, to understand the impact of globalization on SSIs' export opportunities, to study the growth pattern of SSI Sector and to recognize the obstacles faced by SSI to cope with globalization. He was able to describe how Indian Small Scale Entrepreneurs were contributing to the world economy and also the significance of the small scale industrial sector as a whole.

On the basis of proofs collected from various developing countries, UNIDO (1969) pointed towards, in a study that MSME enterprises with a minor level of per worker investment generally achieves higher capital productivity than more capital concentrated enterprises. Bargal et al. (2009) studied the interaction between GDP, SSIs Output and SSIs Exports along with the comparison of SSIs pre and post liberalization era performance parameters. The findings indicated that in comparison to the pre-reform years, the average annual growth rate of various SSI parameters has reduced in the nineties. Between the GDP of Indian economy and the production and exports of small scale sector, no lead-lag relationship was found. Focusing on policy changes which released novel opportunities for Small Scale Industries, Singh et al. (2012) analysed this sector's performance in India. It was concluded in this study that in terms of SSI unit count, production & employment levels, SSI sector has progressed. As a recommendation the study suggests financial infrastructure strengthening and promotion of technology to improve SSI and accomplish development objectives.

Kansal et al. (2009) in his research paper attempted to analyse globalization's impact on small scale industries' growth. Comparison of the development prototype of key parameters among Pre- and Post- Globalization periods, revealed that when growth of number of units, production, employment and exports of SSI is considered, Globalization had a negative effect. Overall it reflects that globalization had a depressing bang on the development of SSI.

Mentioned below are the guidelines defined by MSMED Act, 2006 for investment in plant and machinery/ equipment:

Table 1: The Guidelines Defined by MSMED Act, 2006 for Investment in Plant and Machinery/ Equipment

Nature of Enterprise Activity	Investment for enterprises engaged in manufacturing or production, processing or preservation of goods (equipment excluding land and building)	Investment for service providing or rendering enterprises (loans up to Rs 1 crore) (equipment excluding land and building)
Micro Industry	<= 25.00 lakhs	<= 10.00 lakhs
Small Industry	>= 25.00 lakhs and <= 500.00 lakhs	>= 10.00 lakhs and <= 200.00 lakhs
Medium Industry	>= 500.00 lakhs and <= 1000.00 lakhs	>= 200.00 lakhs and <= 500.00 lakhs

Objectives of the Study

The present study firstly focuses on identifying the various source of microfinance available at present in the market. The role of Micro Finance Institutions (MFIs) in sustainable development of Micro, small and medium scale enterprises (MSMEs), in entrepreneurial development and SMEs as a whole have been the subject of various research studies. However, none has ever focused on the challenges faced by MSMEs in Jaipur, Rajasthan in accessing microfinance. In this regards, below are the specific formulated objectives:

I. Recognising what difficulties MSMEs face in accessing microfinance from varied sources.

II. Evaluating MFIs awareness amongst the MSMEs.

Hypothesis for the Study

Listed below are the formulated hypothesis:

i) Regarding Complexities faced by MSMEs in accessing finance from various sources of microfinance:

H_{01} (Null Hypothesis): No significant difference.

H_{a1} (Alternative Hypothesis): There is significant difference.

ii) Regarding Awareness level amongst MSMEs for various MFIs:

H_{02} (Null Hypothesis): No significant difference.

H_{a2} (Alternative Hypothesis): There is significant difference.

Research Design

An exploratory study based on primary data and secondary data source as been presented in this research paper. The survey methodology has been adopted in this study and it utilizes secondary data including policy documents, Acts of parliament, related studies in India and elsewhere to emphasize the challenges that are being faced by MSMEs. The demographics of this study comprises of all MSMEs operating from Jaipur, Rajasthan. But, in order to gather the sample from the population, purposive and random sampling techniques have been adopted. Three local areas were chosen; namely, Sanganer, Sitapura and Amer as they represent the prime commercial area, thereby holding larger number of MSMEs in the Rajasthan state. The MSMEs were taken at random from these mentioned areas. Data obtained from the secondary data sources is supplemented by primary data extracted from a purposive sample of 90 urban MSMEs using focus groups and semi-structured questionnaires at a 72.22% reply rate from the respondents. An equal number of questionnaires, 30, were distributed to each of the mentioned local area making it 90 questionnaires in total. However, only 65 of the MSMEs returned back the completed questionnaires for analysis (25 from Sitapura, and 20 each from Amer and Sanganer). Thus the study comprises of 65 MSMEs. Chi-Square method of analysis along with SPSS was used to analyze the collected data.

Data Presentation and Analysis

General Characteristics of the Sample

In the sample, male respondents (51.4%) are more than female respondents (48.6) as shown in the Table 1. The participants in the MSME sector in Jaipur city have more of vocational education (22.9%) and primary education (20.0%). With this educational background, these people will not get white collar job and therefore they land up to running their own business.

The major challenges faced by the respondents in getting finance include lack of collateral and lack of sufficient capital. The respondent's perception about the MSMEs in Jaipur city is that 42.9% of the sample believes that access to finance is not adequate for MSMEs.

Table 2: General Statistics

Parameters	%	Parameters	%
Gender		**Location**	
Male	51	Amer	30.80%
Female	49	Sanganer	30.80%
		Sitapura	38.50%
Age		**Duration of Business**	
21-30	23	Below 4 years	20.00%
31-40	23	4-9 years	31.40%
41-50	29	10-15 years	28.60%
51-60	11	Above 50	20.00%
Above 60	14		
Qualification		**Major Challenges faced**	
No formal education	14	Lack of collateral	25.70%
Primary education	20	Fluctuations in Demand	17.10%
Vocational education	23	Bureaucratic procedures in formalising business	11.40%
Secondary education	8.6	Lack of sufficient capital	34.30%
Graduation	17	High competition	11.50%
Post Graduation	17		
Position		**Perception about MSMEs in Jaipur**	
Owner	69	Access to finance is not adequate	42.90%
Manager	31	Most MSMEs cannot access finance due to lack of collateral securities	28.60%
		Disparity between loan refund and business take off	17.10%
		Disparity between profit creation and the cost of capital	11.40%
Number of Employees			
1-4	23		
5-49	23		
50-99	29		
Above 100	26		

Financing Preference of MSMEs in Jaipur

Table 3 Responses as to the view of the respondents of the complexities MSMEs face when accessing finance from the various sources of microfinance. (H_{01}: There is no significant difference in the complexities MSMEs face when accessing finance from various sources of microfinance.)

Table 3: Various Sources of Finance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Family and Friends	17	26.2	26.2	26.2
	Personal Savings	32	49.2	49.2	75.4
	Banks	6	9.2	9.2	84.6
	Micro Financial Institutions	2	3.1	3.1	87.7
	Money Lenders	8	12.3	12.3	100.0
	Total	**65**	**100.0**	**100.0**	

Table 4: Jaipur City

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Amer	20	30.8	30.8	30.8
	Sanganer	20	30.8	30.8	61.5
	Sitapura	25	38.5	38.5	100.0
	Total	65	100.0	100.0	

Table 3 and 4 above reflect the sample population's responses in percentages and figures. It's seen that out of 65, 17 MSMEs (26.2%) acquired the finances from family and friends [5 (29.4%) from Sanganer, and 6 (35.3%) from Amer and Sitapura each], 32 MSMEs (49.2%) acquired the finances from their personal saving [12 (37.5%) from Sanganer, and 10 (31.2%) from Amer and Sitapura each], 6 MSMEs (9.2%) acquired finances from bank [1 (16.7%), 2 (33.3%), and 3 (50%), from Amer, Sanganer and Sitapura respectively], 2 MSMEs (3.1%) acquired finances from MFIs [both from Sitapura Area], and 8 MSMEs acquired their finances from money lenders [3 (37.5%), 1 (12.5%), and 4 (50%) from Amer, Sanganer and Sitapura respectively].

It can be seen from the sample data, that out of the 65 responding MSMEs, most (32) MSMEs use up their personal savings in order to finance their MSME. Therefore, as an inference of the analysis, personal savings serves as the mainly obtainable source of finance to MSMEs in the Rajasthan state. It was during the interviews conducted, that majority of the MSME managers shared that sources of finance such as Banks and MFIs are not within their reach and thus they had to resort to other financing sources, like personal savings and family and friends.

Table 5: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.146(a)	8	0.632
Likelihood Ratio	7.045	8	0.531
Linear-by-Linear Association	0.861	1	0.353
N of Valid Cases	65		

a 9 cells (60.0%) have expected count less than 5. The minimum expected count is .62.

The chi-square test reveals in the **Table 5** above 0.632 significance value (> 0.05 value set for alpha). Thus the H_{01} hypothesis stating that, 'There is no significant difference in the complexities faced by

MSMEs when accessing finance from various sources of microfinance' is acceptable. This implies that Rajasthan state MSMEs face significant complexities in accessing finance from various sources of microfinance. **Figure 1.**
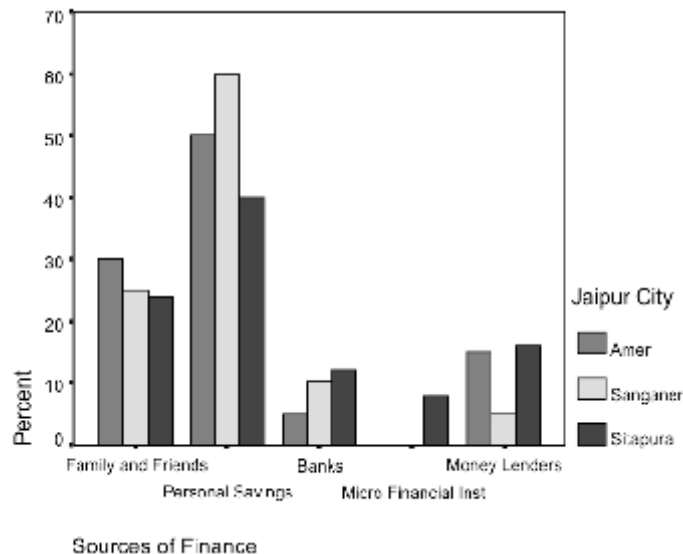

Figure 1: Various Sources of Finance

Micro Financial Institutions' Awareness level amongst MSMEs in Jaipur

Table 6 Responses as to whether there is a significant difference in the level of awareness of MFIs by MSMEs (H_{02} : There is no significant difference in the level of awareness of MFIs by MSMEs).

Table 6: Level of Awareness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	29	44.6	44.6	44.6
	No	36	55.4	55.4	100
	Total	65	100	100	

Table 7: Jaipur City

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Amer	20	30.8	30.8	30.8
	Sanganer	20	30.8	30.8	61.5
	Sitapura	25	38.5	38.5	100.0
	Total	**65**	**100.0**	**100.0**	

Table 7 above reflects the sample population's response. It's seen that out of 65, 29 (44.6%) are aware of the finances [20 (69.0%), 5 (17.2%), and 4 (13.8%) from Sitapura, Sanganer and Amer

respectively], 36 (55.4%) are not aware of MFIs [16 (44.4%), 15 (41.7%) and 5 (13.9%) from Amer, Sanganer and Sitapura respectively]. Based on the analysis, it can be inferred that the state MSMEs have poor awareness of MFIs. It's only Sitapura area of Jaipur city that shows high awareness of MFIs (20 out of 25 respondents), on the other hand both Amer and Sanganer area show poor awareness of MFIs (4 and 5 out of 20 respectively). However, it can also be concluded from the interviews that a high portion of those reporting that MFI is not available in their community, might actually just be unaware of its presence. Consequently the study sums up that a larger portion shows extremely low MFI awareness.

Table 8: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.686(a)	2	0.000
Likelihood Ratio	21.824	2	0.000
Linear-by-Linear Association	16.933	1	0.000
N of Valid Cases	65		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.92.

The chi-square test reveals in the **Table 8** above 0.00 significance value (< 0.05 value set for alpha). Thus the H_{02} stating that, 'there is no significant difference in levels of awareness of MFIs by MSMEs' is rejected. This implies that state SMEs show significant difference in awareness level of MFIs.
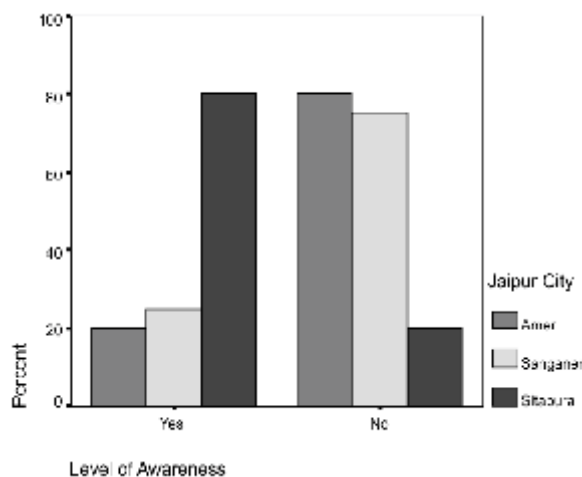**Figure 2**

Figure 2: Level of Awareness

Conclusions and Recommendations

Microfinance is definitely a boon to the people of developing nations who are really in need of the funds so that they can channelize such funds for betterment of their life. Microfinance success can be measured by seeing the development of the rural backward areas on a significant scale. It is favored to empower women by making them self-reliant entrepreneurs & there by uplifting their status in the society. It is not only confined to status up gradation of women but also increasing their decision

making role in the family affairs. Micro finance is not only acting as a big supporter of agriculture pillar, but with agriculture it is playing a vital role in the development of the society as a whole.

The purpose of this study was to identify the challenges the MSMEs sector in Jaipur is facing in accessing micro finance and provide some recommendations on how to overcome those challenges. The research conducted in Jaipur city of Rajasthan state shows that the formal financial sector which mainly includes banks and Micro Financial Institutions, haves been unsuccessful in providing sufficient financial services and micro finance to MSMEs mainly owing to high operation costs, unavailability of collaterals, insufficient skills in developing and organizing banking projects, and lack essential proficiency in developing financial products suited to MSMEs.

This paper has assessed various research literatures so as to arrive at a more conversant viewpoint about the challenges being faced by MSMEs in financing new and existing businesses. The assessment demonstrated that finance is a basic necessity for the expansion and development of MSMEs. However, MSMEs of Jaipur city of Rajasthan state faced the challenge of where to source the capital, to set up a new business or enlarge an existing one. The problem which has remarkably distorted entrepreneurship development in the city is that MFIs in the city were supposed to be the big solution of MSME financing problem, yet a large number of entrepreneurs are unaware of its existence.

To guarantee efficient financing of MSMEs and in turn promote entrepreneurship in the Jaipur city and thereby in the Rajasthan state, the state government interventions funds programmes aims at stimulation of economy and reduction in poverty. State MSMEs should be made more informed about the MFIs operations. This might be made possible via spreading awareness about the purpose and functioning of MFIs, moreover where and how they can be reached by public at large.

The study recommends that government initiatives are needed in association with supplementary stakeholders in the segment to step up hard work in enlightening MSME owners and managers for smooth operations of their businesses but also to increase their eligibility for taking bank loans. The study also suggests that SHG/micro credit programs should be well designed in order to provide loan to each and every sector as per the need of the beneficiaries.

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PERFORMANCE ANALYSIS OF BLUE-CHIP COMPANIES THROUGH STOCK ANALYSIS

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Abstract

Blue-Chip stock are the shares which provides an opportunity to earn high returns on the investment. The price of such shares is less volatile hence, movement in the price of the stock is easily predictable. The companies holding blue-chip stock are market leaders in their respective industry as they have already proven their positioning & business models in the market, which makes it difficult for their competitors to encroach on their market share. The prices of the stock in Blue-Chip companies is comparatively high and vigorous trading in Blue-chip companies' stock is profitable due to consistent return on investments. The purpose of this study was to explore the concept of Blue-Chip companies' stock and to analyse the performance of top 10 companies on certain financial performance criteria's, and the data used for this purpose was secondary data collected through various official websites. Further, it can be concluded that it is worth investing in Blue-Chip Companies stock if an investor is looking forward to long term investment with constant growth & returns. The drive of selecting the blue-chip stocks of market leaders was to analyse and relate their positions with existing performance in the market in respect to their enterprise value, profitability and low debt.

Keywords: Blue-Chip Companies, Market Capitalization, Earnings per Share, Net Profit, Return on Equity & Stock Analysis

The term 'Blue-Chip' came from the game poker where the blue gambling chips holds the highest value. Blue-Chip stocks are shares of the well-established companies having sound financial performance with the capabilities to undergo tough market conditions and give constant good returns. The value of Blue-Chip stock is generally high as the company stands with good reputation and as leader in their respective industry. Such stocks are referred to be as high-quality stocks instead of high-priced stocks as they deliver superior returns in long run to the investor. Blue-Chip yield consistent dividends and the future price growth is more certain, even at times when index is falling, their stock price is more stable. Blue-chip companies are the best dividend players and it's difficult to beat them in their game. The price of blue-chip stock fluctuates but at a lower rate. Hence, blue-chip stocks are safest investment as their future progress is easily predictable.

Several parameters on the basis of which identify the blue-chip stocks are given in **figure 1**
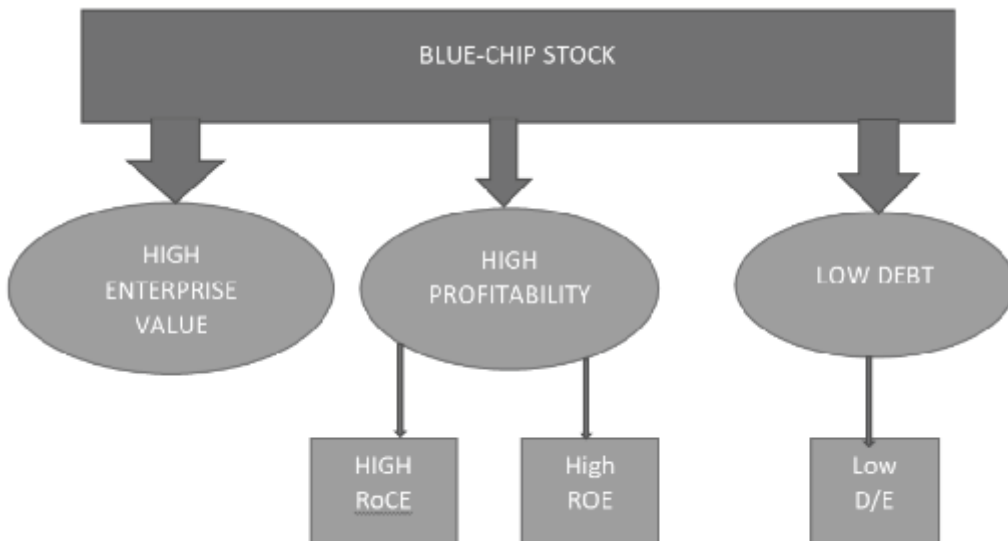
Figure 1 : Blue-Chip Stocks

Types of Blue-Chip Stocks:

The blue-chip stocks can be classified into below categories:

Growth Stock: Blue-Chip companies with growth stocks usually have high earnings which is further ploughed back in the company for business growth. In such companies' dividends are paid less to the shareholders but the interest of the shareholder doesn't gets affected as company is flourishing with time.

Value Stock: The actual worth of such stocks of blue-chip companies is comparatively higher than its current stock price. Such stocks of blue-chip companies are undervalued in the market but are being considered to be as potential stock.

Cyclical Stock: Cyclical stocks are those stocks whose stock price value depends upon the functioning and the condition of the economy. If the economy is falling down the price of the stock will decrease and if the economy is at boom, the price of the stocks will increase.

Income Stock: Blue-Chip companies with Income stocks are generally well-established companies with high rate of earnings. Such companies' pay high dividends to their investors due to which the stocks of the company are less volatile in the market.

Need/benefit of the Blue-chip Stocks:

Stable Earnings: The prime objective of investor is to get good returns on their investments and i.e. exactly being offered in case of blue-chip companies. Blue chip companies provide steady earnings over a certain period of time which makes them more reliable and trust worthy companies. Even at the plugging stage of economy, investors need not worry about their investments in blue chip stocks.

Regular Dividends: Blue-chip companies maintain a consistent trend in paying dividend to its shareholders. Blue-chip companies do not have constant increase in prices, but cover it up with uninterrupted dividend pay-outs which aids capital appreciation in the long run.

Strong Financials: Blue-Chip companies have an understanding and convincing vision for the future of their company. The efficient operating cycles, strong financial ratios support sturdy financial standing contributing to the continuous growth of the company. Due to the strong financials and liquidity position stocks remains to be secure and steady hence, they don't undergo market fluctuations.
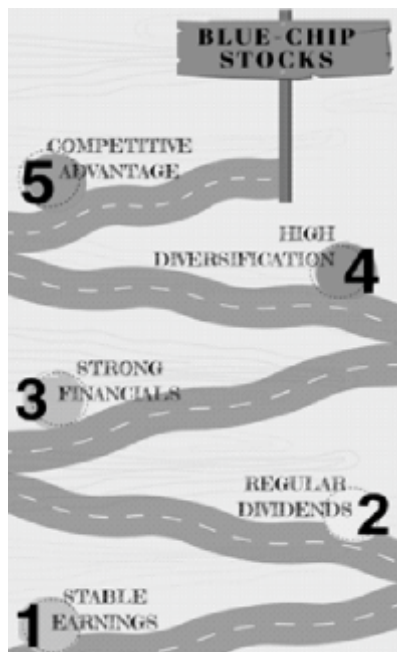

Figure 2: Need/ benefit of the Blue-chip Stocks

High Diversification: The stock value of Blue-Chip companies carries very nominal risk as they are the most stable ones. Such stocks reduce your portfolio risk. Blue-Chip companies have diversified business interests and sources of revenue, which safeguard them from operational hindrances.

Competitive Advantage: Blue-Chip stocks maintain a profitable history which makes them market leaders with increased goodwill provides a competitive edge to them over the other players in their industry, as holding their stock is considered to be prestigious. Such companies are cost efficient and holds a high value, which in turn helps them in selling their products regardless of the economic scenario. **Refer Figure 2**

Review of Literature

Kalyan, Nalla. (2017), This paper is based on the study on investment in Mutual funds of Blue-chip stocks as part of a conservative investment strategy. The paper highlighted the ways to identify risk and returns involved in the blue-chip fund. The study was done on State Bank of India Mutual Fund (SBI MF) which is one of the largest mutual funds in the country with an investor base of over 5.4 million. With over 20 years of rich experience in fund management, State Bank of India Mutual Fund brings forward its expertise in consistently delivering value to its investors. The target of this paper is to evaluate the performance of State Bank of India blue chip fund comparing with a benchmark for the period of 2014-2016.

Hamsalakshmi and Manickam (2004) has made "A study on financial performance analysis of selected software companies" in which the focus was to examine the structure of liquidity position, leverage and profitability. The facts of the study revealed a favourable liquidity position and working capital position and has also exposed that the companies rely more on internal financing and the overall profitability has been increasing at a moderate rate.

Kuldip Kaur (1998) studied "Size, Growth and Profitability of Firms in India - An Empirical Investigation". In this context, the studies of various facts of 235 firms of India have been undertaken, covering the period from 1970-71 to 1980-90. Growth pattern of the firms showed that majority of the firms recorded growth rate from 10 to 20 per cent. Two measures of profitability have been used in the study, the profitability margin (operating profit as percentage of net sales) and the profitability rate (gross profit as percentage of net sales). However, the analysis in case of Indian firms showed that there was no systematic tendency for average profitability to increase / decrease as the size of the firm changed.

Objectives of the Study

To focus on analysis of top ten blue chip companies in Indian context in terms of market capitalization, Net Profit, Earnings per share and Return on Equity.

Research Methodology

The data for the present study was secondary in nature. Secondary data related to the performance of the blue-chip companies have been collected from the stock exchange websites.

Tools for Analysis

The following are the tools that have been used in this research:

(a) Market Capitalization

(b) Earnings per share

(c) Net Profit

(d) Return on Equity

Table 1: Market Capitalization of top ten blue Chip Companies as on 28 Nov.19 at 3.05 p.m.

S. No.	Security Code	Company	Market Capitalization
1.	500325	RELIANCE INDUSTRIES LTD.	995089.48 Cr
2.	532540	TATA CONSULTANCY SERVICES LTD.	770533.44 Cr
3.	500180	HDFC BANK LTD.	699944.37Cr
4.	500696	HINDUSTAN UNILEVER LTD.	453030.22 Cr
5.	500010	HOUSING DEVELOPMENT FINANCE CORP.LTD.	403563.68 Cr
6.	532174	ICICI BANK LTD.	326938.16 Cr
7.	500247	KOTAK MAHINDRA BANK LTD.	309213.58 Cr
8.	500112	STATE BANK OF INDIA	306649.65 Cr
9.	500875	ITC LTD.	303484.36 Cr
10.	500209	INFOSYS LTD	296409.88 Cr

Source: https://www.bseindia.com/markets/equity/EQReports/TopMarketCapitalization.aspx

Table 2: Net Profit, EPS & ROE of the Ten Blue-chip Companies

S. No.	Company	NET PROFIT	EPS	ROE
1	RELIANCE INDUSTRIES LTD.	35,163.00 Cr	57.14	8.66
2	TATA CONSULTANCY SER VICES LTD.	30,065.00 Cr	87.04	38.03
3	HDFC BANK LTD.	21,078.17 Cr	42.72	15.01
4	HINDUSTAN UNILEVER LTD.	6,036.00 Cr	30.42	83.95
5	HOUSING DEVELOPMENT FINANCE CORP. LTD.	9,632.46 Cr	55.93	13.58
6	ICICI BANK LTD.	3,363.30 Cr	7.95	4.64
7	KOTAK MAHINDRA BANK LTD.	4,865.33 Cr	30.28	12.60
8	STATE BANK OF INDIA	862.23 Cr	11.34	-
9	ITC LTD.	12,464.32 Cr	11.30	24.34
10	INFOSYS LTD	14,702.00 Cr	34.56	25.17

Source: https://www.moneycontrol.com/stocks/marketinfo/netprofit/bse/index.html

Source: https://www.bseindia.com/stock-share-price/infosys-ltd/infy/500209/

Research and Findings

1) Based on the above data available, it can be concluded that Reliance Industries Limited has the highest Market Capitalization of Rs 995089.48 crores as on 28th Nov, 2019.

2) Net profit for Reliance Industries Limited also stands highest among top 10 companies.

3) The studies reveal that Tata Consultancy Services Limited ranks first in terms of EPS.

4) On the basis of Return on Equity (ROE) Hindustan Unilever Limited is the leading one.

Conclusion

Most mechanized and matured companies with a stable debt equity ratio, sturdy financial position, excellent management staff, interest coverage ratio, brand image, consistent dividend pay-outs, stable growth rate and increased goodwill has been termed as Blue-Chip companies. Blue -Chip companies' stocks are preferred for the long-term investments and not for the short-term investments, as in long run it creates high value due to consistent growth. Even the market leaders suggest to have the proportion of blue-chip company stock in the portfolio so that recovery of the market distress can be done easily at the investor end.

Blue-Chip companies have already reached to the peak of their performance in their respective sectors therefore, investment in equities of these companies carries low growth potential, together with low returns when compared to companies that have a high growth potential.

Limitation

Limited tools have been used to analyse the performance of the companies and also data related to only top 10 companies have been analysed.

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HIGHER EDUCATION AND SUSTAINABLE DEVELOPMENT: AN EXPLORATION

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Abstract

The world is passing through the worst crisis of its existence nowadays. It is true that the last two centuries have witnessed unprecedented progress on account of the advent of science. The desire for a better lifestyle and comfort has pushed men to exploit the earth. Natural resources which sustain our life are depleting fast. Our forests are shrinking, air, water and land are polluted. Animals and plants which form part of the food chain are vanishing. We are living in challenging times. The challenge encompasses the tremendous environmental degradation, escalating economic impacts of environmental issues, regulation and policy changes and the consequent need for compliance. Time is short and we really need to multiply the scale and complexity of our efforts to survive. It's here that education institutes have a critical role to play that is, equipping graduates with right set of knowledge, skills and attitude to address the issues of sustainability. Indeed, the curriculum needs a renewal to match the pace of societal progress.

Key Words: Higher Education, Sustainable Development, Society, Academics

Literature Review

Lozano et al (2013) propose that higher education has, since times immemorial, played a very vital role in bringing about societal transformation by educating business leaders, decision-makers, entrepreneurs and academics. It is a well-known fact, but unfortunately not a well-researched aspect. Desha and Hargroves (2014) assert that the planetary crisis that we face today is actually a crisis of education. Martin and Jucker (2005) assert that educational institutes, by virtue of the fact that they educate the masses and create people who manage the institutions of the society, share the onus to create awareness, knowledge, technologies and tools to create an environmentally sustainable future by creating a sensitized and aware workforce. Sustainable development has for long been a political agenda, but not an educational agenda. The institutes are also expected to play a dominant role in espousing the cause of sustainability (Chalkley, 2006). UNESCO (2006) reiterates that there is a worldwide recognition of the fact that the pace at which we are growing is not environmentally sustainable and awareness, education, and training of the masses is the only way to move the society towards sustainability. As reported by Walter Erdelen, Assistant Director-General for Natural Sciences, UNESCO in a UNESCO report "Higher education institutions play a strategic role in finding solutions to today's leading challenges in the fields of health, science, education, renewable energy, water management, food security and the environment. We need higher education institutions to train teachers in the conduct of pedagogical research and develop relevant curricula that integrates the values of sustainable development".

Education in general, and especially management education, has a bigger role to play in the entire scheme of things. Alcaraz, Thiruvattal, and Escudero (2010), advocate that management grads equipped with business education are expected to make business decisions, which would have far

reaching effect on sustainability-economic, social and environmental. Hence, sensitizing them on issues of sustainability is an urgent global priority (Littledyke, Manolas,and Littledyke ,2013). Doing this is not a matter of choice, it is a priority. Higher education is expected to lead the so called 'green movement' (Weissman, 2012).Institutes of higher education should champion the cause of sustainability by demonstrating their commitment by actually reducing the global warming emissions and incorporating sustainability into their curriculum. This would create an ethically conscious civil society (The American College and University Presidents' Climate Commitment, 2012).

Literature abounds in findings that the curriculum has slowed down, but there is a huge gap in literature that proposes how the acceleration can be achieved. Leiserowitz and Fernandez (2008) assert that an interdisciplinary study with social sciences as the mainstay, is needed to raise issues of values, ethics and culture, which are the cornerstones of humanity. Rhodes (2006) suggested that sustainability is an attempt to formulate the policies (social and economic) in order preserve the earth's available resources with minimum disruption to flora and fauna, inhabitants and environments and pointed out that liberal arts education is important in the teaching of sustainability. Emphasis on liberal education, interdisciplinary focus, diversity and civics can help address the sustainability issue (Sherren, 2008). Ter Horst and Pearce (2010) suggest that foreign language could also be an agent of integration in comprehending the meaning and practice of sustainability across global collaborative communities.

Objectives of Research

The proposed research aims at finding out

a. The current level of comprehension that prevails in higher education institutes, with respect to sustainability;

b. Is it feasible to have a uniform code of conduct for the society in order to attain sustainability?

c. How can higher education institutes integrate sustainability into the curriculum and become more responsible towards the cause of sustainability?

Research Methodology

The research involved both Exploratory and Descriptive research.

Exploratory Research

The exploratory research was undertaken to have a better understanding of the research problem and the variables involved. It included the following:

a. Literature review is done on the discipline of sustainability and morality;

b. Focus group discussion with select scholars from academics and practice who enjoy an acclaim in the area of sustainable development.

The insights drawn from the exploratory stage, helped as an input in the Descriptive Phase of the research.

Descriptive Research

Descriptive Research involved seeking primary data from higher education students. The study is based on primary data collected from the students pursuing PGDM (Post Graduate Diploma in Management) from the private B-Schools located in Rajasthan and NCR. The students belonged to

both first and second year of the PGDM program.

Measurement Instrument

The questionnaire had close-ended questions designed in sync with the theoretical constructs and the inputs received from the focus group discussion with experts.

Sample Size

100 questionnaires

Sampling Method

The sample was drawn using a simple random sampling method.

Data Collection and Data Analysis

The data was collected online using google doc. The link was sent to the respondents and the responses thus obtained were analyzed using MS-Excel. The questionnaire was administered to the respondents in the months of November, 2019-January, 2020.

Data Analysis and Findings

Higher Education Students
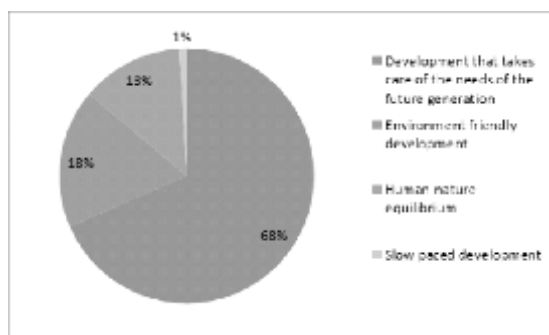
Figure 1: What do you understand by sustainable development?

The above figure 1 indicates the following:

· 68% of the higher education students understand sustainable development as development that takes care of the needs of the future generation.

· 18 % feel that sustainable development is environment friendly development.

· 13% assign human-nature equilibrium as the meaning of sustainable development.

· 1% of the respondents define sustainable development as slow paced development.
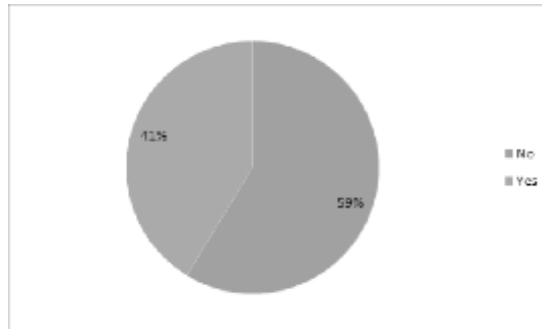
Figure 2: Do you feel that we are surviving in a sustainable world?

The figure 2 indicates the following:

· Only 41% of Higher Education students feel that we are living in a sustainable world, while 59% feel that we are living in an unsustainable world.
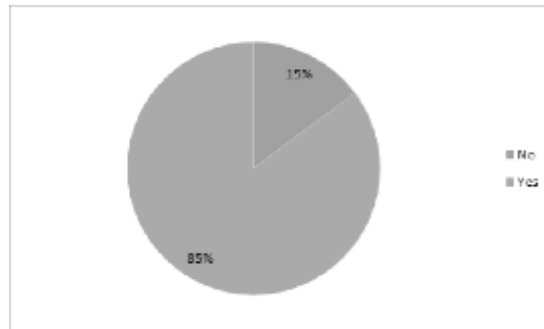

Figure 3: Do you think that sustainability can be taught in college?

The figure 3 indicates the following:

· Only a meager 15% of Higher Education students are of the view that sustainability cannot be taught, while 85% are hopeful that sustainability can be taught.
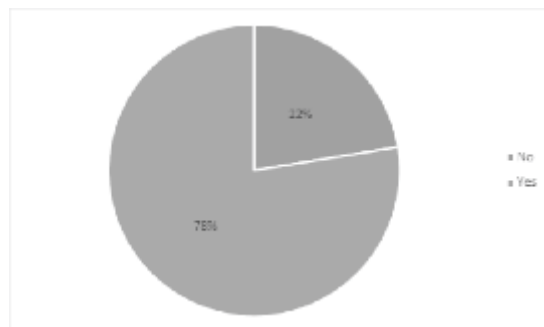
Figure 4: Is there any course on Sustainability?
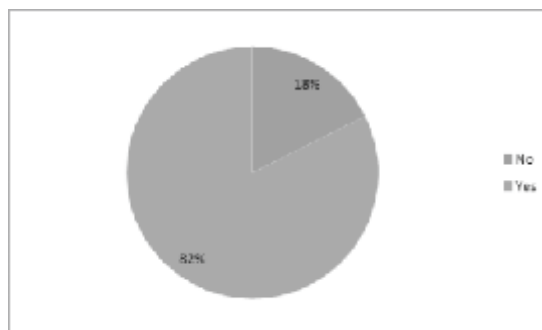
Figure 5: Do you feel that there is a decline in the moral values of your generation?

The figure 5 indicates the following:

· 82% of the Higher Education students feel that there is a decline in the moral values of the current generation, while 18% of the higher education students are averse to the opinion that there is a decline in the moral values of the current generation.
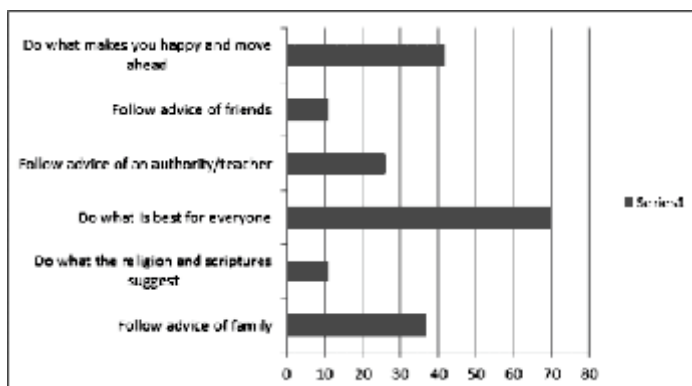

Figure 6: In making choices, if you are ever unsure of what is right or wrong in a situation, how do you decide what to do?

The figure 6 indicates the following:

· In the event of a moral dilemma, the higher education students do what is best for everyone. This is followed by doing what makes them happy and moving ahead. Advice from family follows next, advice of authority/ teacher follows next, followed by advice from friends. Least followed is what the religion and scriptures suggest.
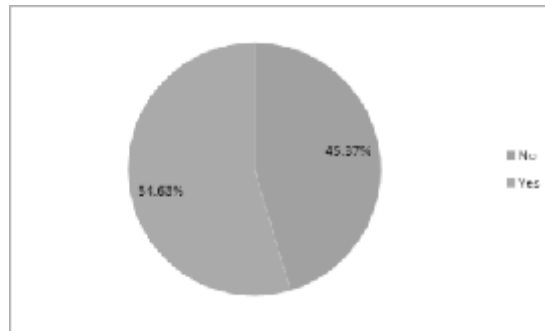
Figure 7: Do you have ethics/moral science/value education as a formal subject in the college?

The figure 7 indicates the following:

· 54.63% higher education students confirm that they have formal courses on moral science/value education and ethics, while 45.37% confirm that they do not have formal courses on moral science/value education and ethics.
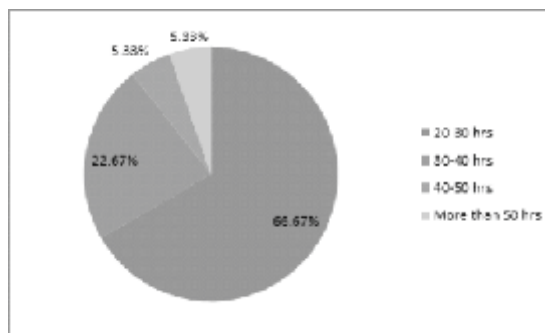

Figure 8: If yes, how many hours is ethics/moral science/value education taught in a year?

The figure 8 indicates the following:

· 66.67% higher education students confirm that moral science/value education/ethics is taught for 20-30 hours.

· 22.67% higher education students confirm that moral science/value education/ethics is taught for 30-40 hours.

· 5.33% higher education students confirm that moral science/value education/ethics is taught for 40-50 hours.

· 5.33% higher education students confirm that moral science/value education/ethics is taught for more than 50 hours.

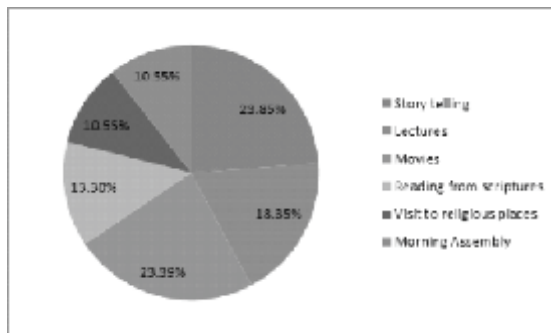· No response is achieved for teaching for less than 10 hours.

Figure 9: What other activities do you have to compensate and compliment for moral science/value education?

The figure 9 indicates the following:

The measures adopted in order to compensate and compliment for value education in the order of decreasing importance is

· Story Telling

· Movies

· Lectures

· Reading from Scriptures

· Morning assembly
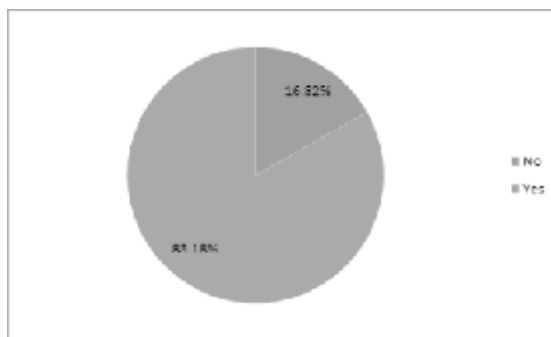
· Visit to religious places

Figure 10: Do you think that having moral science/value education as a formal subject in the college can instill moral values in you?

The figure 10 indicates the following:

83.18 % of the higher education students believe that formal courses on values/ethics/moral science can instill moral values in an incumbent, while 16.82% respondents do not believe thus.
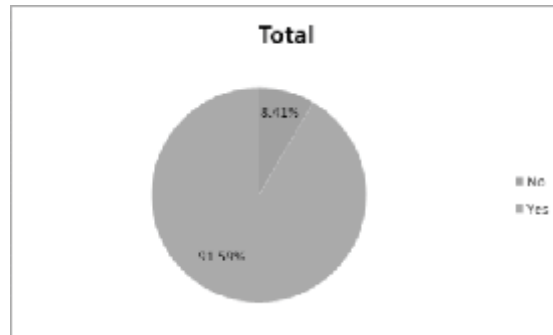
Figure 11: Do you think moral values in students shall lead to sustainable world and society?

he figure 11 indicates the following:

· A whopping 91.59% higher education students believe that moral values in s student can lead to a sustainable world and society, while a meager 8.41 % believe that it is not thus.
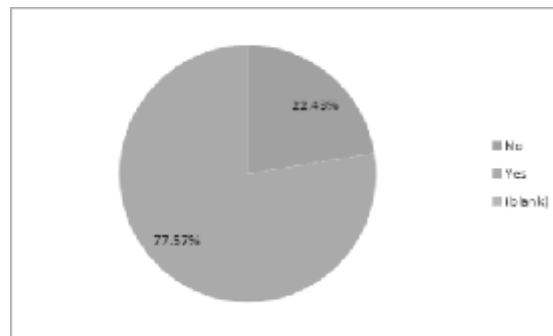

Figure 12: Do you think that there can be a uniform moral code of conduct for the society for sustainable development?

The figure 12 indicates the following:

77.57% of higher education students believe that there can be uniform moral code of conduct for the society for sustainable development, while 22.43% of the respondents do not agree with this.
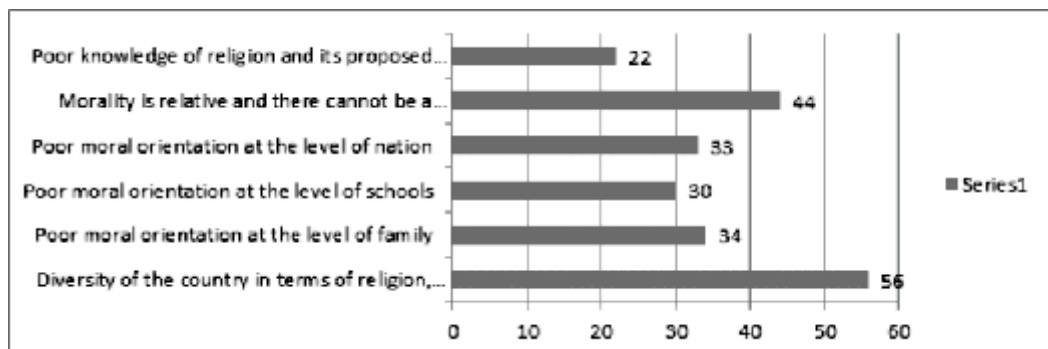

Figure 13: What could be the difficulties in having a common moral code of conduct for the society?

The figure 13 indicates the following:

As per the higher education faculty, the difficulties encountered in having a moral code of conduct for the society in the order of decreasing importance are as follows:

- Diversity of the country
- Morality is relative and thus there cannot be a common code of conduct
- Poor moral orientation at the level of family
- Poor moral orientation at the level of nation
- Poor moral orientation at the level of schools
- Poor knowledge of religion and its proposed values

Recommendations

- Literature review suggests that higher education can and should address the cause of sustainability. It also indicates education has the potential to influence the future decision makers, policy formulators and policy implementers and thus sensitization, education, training and research undertaken in institutes of higher education can give an impetus to sustainability in all its forms and manifestations.

- The current study began with an introspection of what is the current understanding of B-school students towards the meaning of sustainable development. The encouraging fact is that 68% of the higher education students understand sustainable development as development that takes care of the needs of the future generation. This is indeed the most precise and accurate definition of sustainability that takes care of the current generation and the generation to come. The comprehension, thus, is correct amongst the management grads.

- More students believe that we are living in an unsustainable world that those who believe that we are living in a sustainable world. This may be perceptual though, but is important for a realization of the magnitude of the problem.

- Most students believe that sustainability can be taught in a B-school. This is a major shift as erstwhile literature reveals that only engineering, energy and environmental sciences institutes were considered to be areas where sustainability education could create an impact.

- Most institutes have a formal course on sustainability. This indeed is encouraging and indicates that higher education institutes are not existing in vacuum. They are quite in alignment with the issue of sustainability and are doing their bit by way of curriculum design and delivery. Realization of the responsibility has already taken place, but the momentum needs to be increased to see the light of the day.

- Students agree with the fact that there is a steep moral decline in the existing generation. Values, ethics have been relegated to a corner and this has a definite bearing on behavior of sustainability. If ethics, values are in place then unsustainable behaviors shall automatically be checked and a sustainable world with empathy, love, peace, wellbeing of all shall be attained. Formal courses on morals and values or may be a focus on the same through

special student driven cells can help the cause.

- A uniform code of conduct can of course lead to sustainability, but looking at the vast diversity inherent in a country like India, it seems unachievable. Nonetheless, small concerted efforts in the right direction can help achieve the tall order.

Conclusion

Achieving sustainability is a universal mandate and education institutes have an undeniably prominent role to play. Literature suggests that the institutes have realized this and are gearing up towards it. The courses and the curriculum have now been vocal on issues of sustainability, but execution is still a challenge. Realization is good, but enough. The curriculum at institutes of higher education needs a revamp to commit itself to the cause of sustainability.

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A STUDY OF PUBLIC FUNDING AND ENROLLMENT IN INDIAN HIGHER EDUCATION

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Abstract

Public funding is crucial for the growth of higher education in the country. This paper aims to analyze the alignment of public funding with enrollment across different types of higher education institutions. This study is based on secondary data for the period 2009 to 2016 from sources such as UNDP, MHRD, AISHE, etc. Analysis of data indicates that public expenditure per student is the lowest on State higher education institutions while they have the highest enrollment amongst all categories of higher education institutions. To reach its 2035 target of 50% GER, India needs to increase public expenditure on higher education, as well as provision for a higher proportion of public expenditure on State higher education institutions as a strategic initiative.

Keywords: Higher Education Institutions, Public Funding, Expenditure per student, Enrollment

Introduction

Indian Higher Education System is one of the largest higher education systems in the world. In 2019, 37.4 million students were enrolled for higher education in the country and the gross enrollment ratio was 26.3%. Higher education is defined as, "an education which is obtained after 12 years of schooling or equivalent and is of the duration of nine months (full time) or after completing 10 years of schooling and is of the duration of at least 3 years". In colonial India, higher education was accessible largely only to the elite few. In post-colonial India, efforts were made to increase the number of institutions of higher education and accessibility to those institutions. By 2001-02, GER was 8.1% which increased to 10% by the year 2004-05. 2005 onwards efforts were made to increase the number of HEIs with active participation of the private sector and increase GER. For the year 2019 the GER was 26.3%. The Ministry of Human Resource Development proposes to increase GER to 50% by the year 2035(National Education Policy 2019).

In India, Government funding has played a significant role in facilitating the spread of higher education. In 2007, the government has spent INR 500,889 million on higher education which was 1.09 % of GDP. In 2010, it was INR 977, 367 million (1.34 % of GDP) which rose to INR 2,295, 199 million (1.51 % of GDP) by 2016. Given India's demographic profile, it is very important that qualitative and quantitative improvements take place in Higher Education Institutes. While there appears to be a clear policy towards creating world class institutions, the structuring of HEI's India also warrants a redistribution of resources in innovative strategic ways to reach the GER target for 2035. **(Refer Figure 1)**
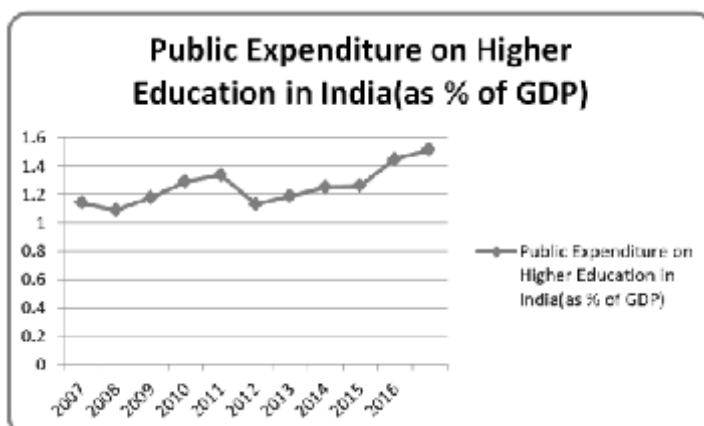
Figure 1: Public Expenditure on Higher Education in India (as % of GDP)

Source: Data from Government of India reports on Analysis of Budgeted Expenditure on Education for respective years

From 1985 to 1996, the educational expenditure of Government of India as a percentage of GDP remained almost stagnant at 3.4 per cent. In 1999, it rose to 4 per cent and reduced to 3.2 per cent in 2008. In 2012; it was 3.8% of GDP while in 2018; it was 4.6% of GDP. The levels of public expenditure on education as a proportion of GDP in some countries for the year 2012 are Norway (6.9%), United States (5.6%), Netherlands (6%), and India (3.8%) as mentioned below in **Table 1**. NITI Aayog report 2018 reiterates, "India currently spends less on education. The expenditure on education should at least 6% of GDP for quantitative and qualitative growth of education in the country."

Table 1: Public Expenditure on Education as a percentage of GDP in some countries

	2008	2010	2012
Norway	6.4	6.9	6.9
Netherlands	5.5	6	6
United States	5.5	5.6	5.6
Canada	4.8	5.5	5.5
India	3.2	3.4	3.8

Source: Data from UNDP: Human Development Report 2018

Literature Review

A systematic review of literature was conducted based on the largest relevant databases available, including SCOPUS, JSTOR and Google Scholar. There is a rich body of literature that has examined the role of funding on quality in higher education, funding being an external input, the role of internal factors to HEI's such as leadership, financial prudence, management of HEIs have been studied. Financial aid has significant direct impact on improving quality of education, management practice, efficiency and accountability of educational process in India (Colclough and De 2010). Mgaiwa (2018) has examined the source of funding for public university education in Tanzania from year

2011 to 2015 and their implications on quality of higher education in Tanzania. He concludes that lack of public funding negatively affects quality of higher education as well as research in Tanzania.

Nisar (2015) has studied the problem of performance based funding in higher education in terms of inherent complexity, affordability, and financial governance of higher education system. Hillman et. al. (2015) have evaluated the impact of performance funding on higher education. Miningou (2019) explains, "Good governance, political stability, and stronger national commitment to finance education play key role in improving efficiency of fund utilization in education". Masino et. al. (2016) emphasis the need to not only increase provision of resources to improve quality of education, but also on the need to optimize fund allocation through "management reforms, standards of practice enforcement and participatory management interventions". There is a need to review key policy strategies regarding funding of education system that can improve quality of service and employability of graduates.

Tilak (2018) states "higher education occupies a low priority in public expenditure. Its share has been around 1% of GDP in 2007". Due to low public funding in higher education in India, the expansion in number of institutions of higher education was made possible by private sector investment. Altbach (2012) argues that "Even if funds are provided, most of the higher educational institutes are not capable of managing them effectively". Therefore from the above discussion it emerges that it is not the paucity of public funding alone for higher education that is an impediment to the quantitative and qualitative growth of higher education. In addition to funding, qualitative improvement of higher education also depends on leadership prudence in the management of funds, foresight and design of management systems at HEI level as well as political foresight.

Research Methodology

Objectives of the Study

- · To study public funding and enrollments in Universities & Higher Education-Centre, Universities & Higher Education- State and Technical Education in India.
- · To analyze the alignment of public funding with enrollment in higher education.

Data Sources and Analytical tool used

This research is based on secondary data pertaining to higher education as mentioned in reports of bodies such as UNDP, MHRD, AISHE, etc. Public expenditure and enrollment in higher education for Centre, State and Technical Education for the period 2009 to 2016 has been analyzed. Technical education includes premier higher education institutions covering programs in engineering, technology, management, architecture, etc. (MHRD 2014). Average value of expenditure per student for the three segments- Centre, State, and Technical was calculated.

Analysis

In 2016-17, INR 2,295,199 million were spent on higher education by the Government of India which was 1.51% of GDP. Out of this, INR 653,222 million was spent in States which is 0.43% of GDP. INR 317,100 million was spent in Centre which is 0.21% of GDP and INR 1,324,876 million on technical education which is 0.87% of GDP. **(Refer Figure 2)**
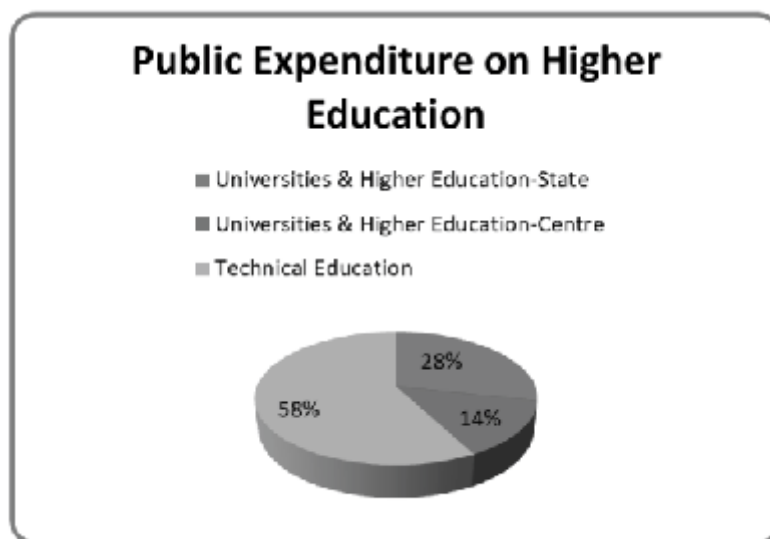
Figure 2: Public Expenditure in Higher Education (in percentage)

Source: Data from Government of India reports on Analysis of Budgeted Expenditure on Education
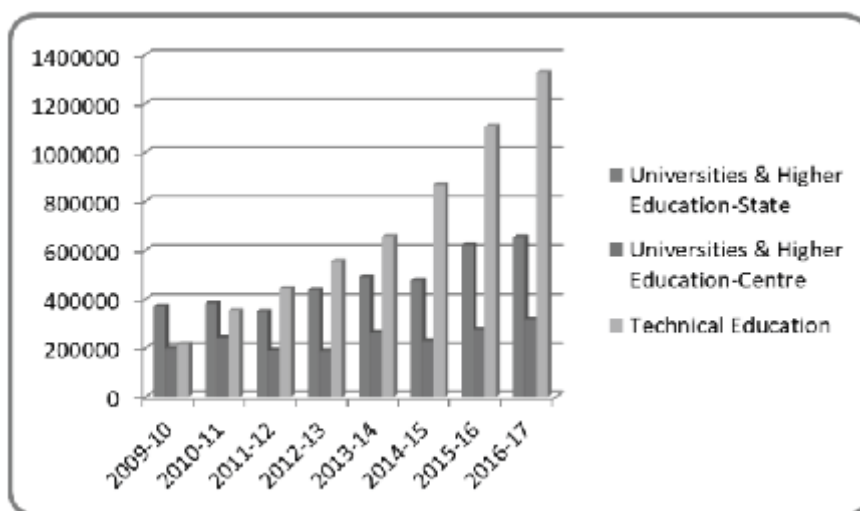

Figure 3: Public Expenditure in Higher Education (in million INR)

Source: Data from Government of India reports on Analysis of Budgeted Expenditure on Education from 2009-10 to 2016-17
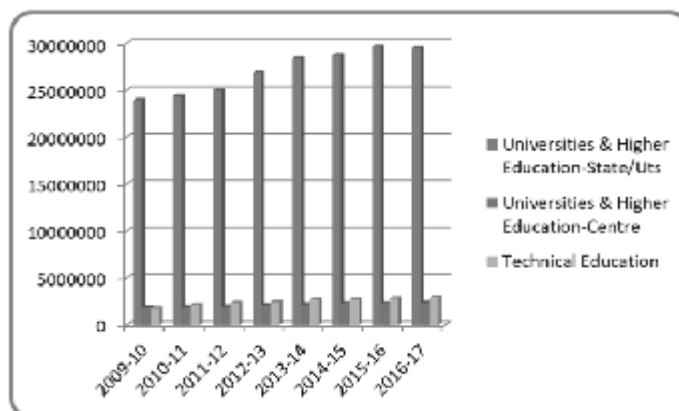
Figure 4: Enrollment in Higher Education (in numbers)

Source: Data from Government of India reports on All India Survey on Higher Education (AISHE) from 2009-10 to 2016-17

In terms of enrollments in higher education, 29.5 million students are enrolled in State higher education institutes while 2.34 million students are enrolled in Central higher education institutes. State higher education institutes have 13 times higher enrollments than Central higher education institutes. Enrollment in technical education is 2.9 million, which is one-tenth part of enrollment size at state level. **(Refer Table 2)**

Table 2: Average value of Public Expenditure per student in Higher Education

Sector	Universities & Higher Education-State	Universities & Higher Education-Centre	Technical Education
Average value of Public Expenditure per student (in INR)	17299.27	110835.3	262968.9

Source: Authors (calculated from different Government of India reports from 2009 to 2016)
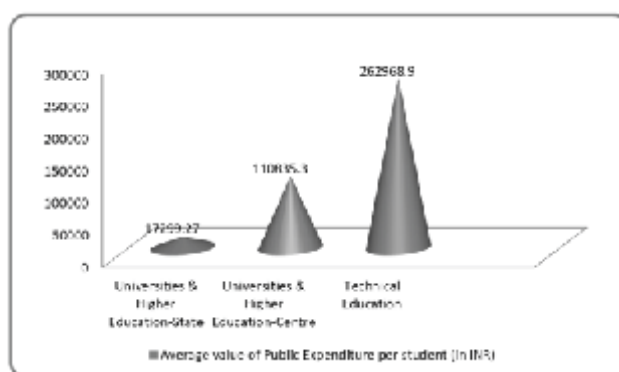

Figure 5: Average value of Public Expenditure per student in Higher Education

Source: Authors (calculated from different Government of India reports from 2009 to 2016)

On calculating expenditure per-student in different types of higher education institutions, a

dichotomous picture emerges. At the state level where 29.5 million students are enrolled, INR 17,299.27 is spent on one student. While in technical education, where 2.9 million students are enrolled, INR 262,968.9 is spent on one student. At the centre, INR 110,835.3 is spent on one student where 2.34 million students are enrolled. Therefore, there is an inverse relationship between enrollment size and expenditure per student by the government in State higher education institutes. **(Refer Figure 5)**
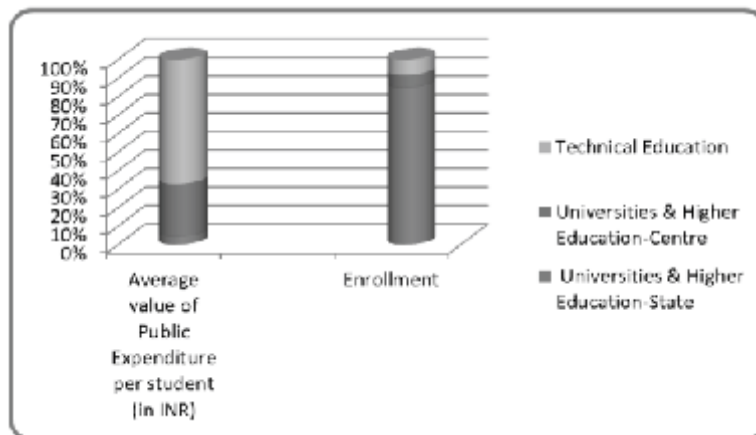

Figure 6: Public Expenditure per student as well as enrollment in Higher Education (in percentage)

Source: Authors

Findings

On state level where 85% of students are enrolled, just INR 17,299.27 is spent on one student. At the central level, INR 110,835.3 is spent on one student where 7% of students are enrolled. While in technical education, where 8% students are enrolled, INR 262,968.9 is spent on one student. There is an inverse relationship between enrollment size and expenditure per student by the government in State higher education institutes. State higher education institutes are deprived of sufficient finance. Thus, to capture a significant position in NIRF ranking remains a challenging task for State higher education institutes. Disproportionate funding with respect to total enrollments, low fee revenues and resource constraints in meeting NIRF quality norms impact the sector adversely making it difficult for them to improve quality significantly. An uneven playing field emerges for Indian Higher Education as major enrollments are in State higher education institutes but this sector is not recipient of fund from Government of India directly. As most State governments are short of funds, meeting the funding requirements for state higher education institutes remains a challenge.

Conclusion

Public expenditure per student is the lowest on State higher education institutions while they have the highest enrollment amongst all categories of higher education institutions. The paucity of funds translates into poor teacher-student ratio, insufficient educational infrastructure, lower NIRF ranking which further leads to lowered funding. Thus, here is a viscous circle of low funding, low quality, and lowered funding. Potential for increasing GER is highest in State higher education institutions. To reach its 2035 target of 50% GER, India needs to increase public expenditure on higher education, as

well as provisioning higher proportion of public expenditure on State higher education institutions as a strategic initiative. There is also a need to improvise governance of higher education institutions of India for optimum fund utilization.

Managerial Implications

To adequately develop a result oriented, contemporary higher education system that meets the aspirations of the youth and society the funding pattern needs a revamp. Though State higher education institutes are funded by State government, there has to be a serious reconsideration of leaving these higher education institutes to be funded only by State governments. There is a need to facilitate funding for state higher education institutes through budget provisioning for at least five years under an umbrella scheme to uplift the quality of state higher education institutes. A funding mechanism that develops a level playing field with faculty recruitment, infrastructure development and curriculum changes for State HEIs is required since a significant majority seeks education to move to a better life at these institutes. Having done that prudent mechanism for quality assurance, revenue generation and revenue management can be developed universally for State HEIs to make them competitive for the benefit of society.

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FUTURE OF HR FUNCTIONS: TECHNOLOGY DRIVEN TRANSFORMATION OF HRM TO REMAIN EFFECTIVE AND RELEVANT

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Abstract

Technology shall usher a new character of HRM, if utilized adequately. Technology shall not alter the relevance of HRM but it shall impose an obligation on HRM to undergo transformation in order to remain relevant and effective. Major manifestations of such transformation shall be visible in data driven decision making, departure from traditional performance appraisal methods, role of AI in many areas of HR confluence and employee experience to name a few.

The paper establishes the emerging transformational trends in HRM as it amalgamates new technologies available to businesses. It explores the main research question: "How organizations are transforming and reinventing HRM in order to remain relevant." The objective of this paper is to etch transformation in HRM as it absorbs innovation and exploring the departures from traditional HRM.

A literature review has been done using an archival method to provide a legitimate organization to the research and build a consistent knowledge base in this field that can prove to be a corner stone for future research. For primary data collection, the search for relevant studies and articles was made in Google scholar and Semantic scholar by using a combination of terms: AI, HR technologies, innovation, technology and such similar subject related key words.

The secondary data was independently obtained using standardized data extraction forms from a wide set of assorted and reliable sources. All data are comparable units and have been generated by official authorities that represent the functions that have been included within the scope of the research.

Keywords: Technology, Innovation, AI, Performance Appraisal, HRM

Introduction

Technology shall usher a new character of HRM, if utilized adequately. Technology shall not alter the relevance of HRM but it shall impose an obligation on HRM to undergo transformation in order to remain relevant and effective. Major manifestations of such transformation shall be visible in data driven decision making, departure from traditional performance appraisal methods, role of AI in many areas of HR confluence and employee experience to name a few.

Artificial Intelligence is a field of Computer Science. In simpler terms, it can be intelligence that is attributed to machines and not humans. It aims to solve cognitive problems commonly associated with human intelligence, by enabling machines to think and perform as humanly tasks such as learning, reasoning, language processing and the like. There are two major technologies that are harnessed for AI: Machine learning and deep learning. Machine learning helps machines to learn and make predictions based on data, where the end objective or target is defined but the steps to be taken to attain the objectives are learnt by the machine itself. Deep learning on the other hand, trains

machines to learn from large amounts of data through neural network, the machine establishes its own parameters.

Till recent years, the application and harnessing of technology was seen very differently than what it is now. Earlier it was used solely to automate redundant tasks where as now, HR is using AI and similar technologies to solve critical problems and drive performance improvements thereby adding positively to profitability. While HR has already become an equal strategic partner is most organizations, AI is further enabling its transition.

Unilever is already harnessing the power of AI by deploying it in their recruitment. Unilever management claims it has saved 100,000 hours of time in the last year by deploying software to analyze video interviews. The system scans graduate candidates' facial expressions, body language and word choice and checks them against traits that are considered to be indicators of job success. Unilever is closely followed by multi national organizations such as Vodafone, Singapore Airlines and Intel that are successfully utilizing similar systems.
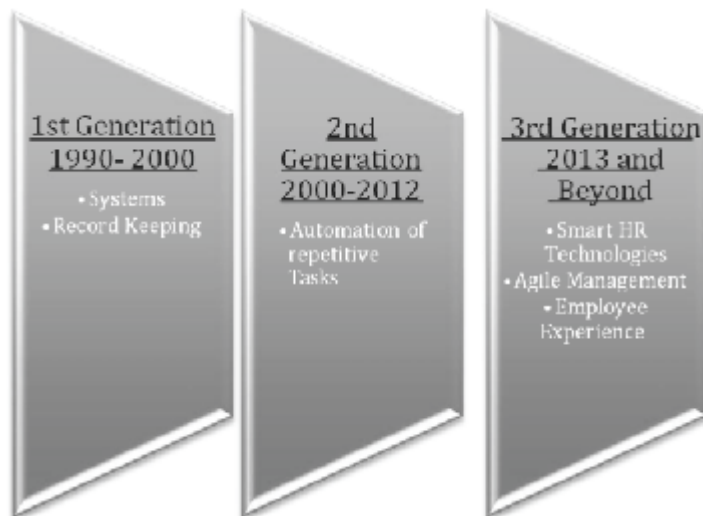

Figure 1: HR Tech Generation

New competitive frontiers come to light and conquered, the most apparent competitive frontier for the present is "Employee Experience" which takes forward the theme of employee engagement. It is here that AI can be seamlessly integrated into the employee life cycle at a firm starting with recruitment and onboarding and continuing till career planning. Thereby providing "bespoke" employee experiences.

Humans are going to be assisting AI in order to derive a mutually rewarding relationship. In the course of this paper we shall see how this integration shall come about and how it translates into various forms of partnership.

Deloitte's Global Human Capital Trends report for 2019, provides an insight into emerging trends that are predicted to dominate for the coming ten years to come.
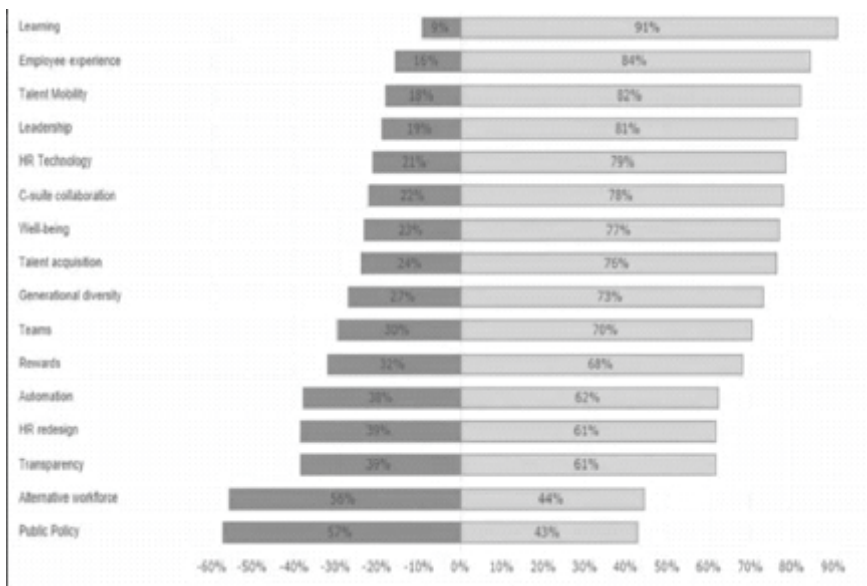
Figure 2: Global Human Capital Trends

Source: Deloitte's 2019 Global Human Capital Trends Report

The report is based on a longitudinal survey of 10,000 participants across 119 countries. It highlights key areas that professionals today are assigning value to and consider them chief opportunities and challenges that shall be upon them. With these global perceptions setting the context, it is of prime importance that the HR managers and boards reconfigure how they harnesses technology- which would call for a redesign of its major functions. As AI transforms not only how business is conducted but also how its human assets are managed, the most significant impact it has is the performance gain.

Methodology

The objective of this paper is to indicate significant works in the field of HR technologies, their integration into HRM, identify sub-functions of such technology deployment, and to examine their effective contribution, leading to subsequent identification of gaps, issues, and scope for further research. A literature review has been done using an archival method to provide a lawful and legitimate organisation to the key elements of the research and build a consistent knowledge base in this field that can prove to be a corner stone for future research. For primary data collection, the search for relevant studies and articles was made in Google scholar and Semantic scholar by using a combination of terms: AI, HR technologies, innovation, technology and such similar subject related key words.

The secondary data was independently obtained using standardized data extraction forms from a wide set of assorted and reliable sources. All data are comparable units and have been generated by official authorities that represent the functions that have been included within the scope of the research.

AI in Recruitment

Many articles and research are focusing their efforts to analyze the characteristics of future of work, propelled by a number of reasons. Recruitment refers to the process of filling a vacancy or vacancies as they arise. Recruitment is a subset of Talent acquisition. Talent acquisition is a broader hiring strategy that monitors talents within the company and their probable growth ladders and does not rest with the HR department alone. By developing an understanding of the inventory of talents within the company the Talent acquisition team creates a hiring strategy to hire to fill in vacancies that shall arise in the coming time.

Expansion of the Talent Pool

· AI can help in finding better candidates as they can continuously monitor large chunk of databases to add to the talent pool, passive candidates. Such technologies can identify signals and predict the availability of candidates for an upcoming opportunity.

Reduction in Recruiter's Response Time

· A sizeable amount of time is wasted in communication during and before recruitment, the HR manager can make use of the time AI saves him or her in order to focus on mire customized and effective interactions.

Predict widespread changes

· The biggest threat to business lies in the "uncertainty of the future". It would be a great advantage to overcome this uncertainty as AI can sense eminent market shifts, indicating trends that would cause a resultant change in the available talent pool. It would add to the HR manager's repertoire if he or she can predict skill gaps, talent shortages and leap ahead of the competition.

Employee Verification

· With employee verification being both crucial and time consuming, the tapping in of AI would mean that the organization would be alerted if any red flags emerge from the data points from employee resumes.

Sourcing and screening of candidates gets more efficient and easier, AI also overcomes the human shortcoming by overlooking stereotypes bias even through gender-coded language. Deployment of technology would call for redesign of many job descriptions; AI shall also assist in creation of more inclusive job descriptions.

GE's digital division boasts of pioneering novel recruitment experiments. Ascendify has been a leading software provider to GE, IBM and CISCO for such requirements.

A close examination of Hilton's processes clearly points it as one of the leading partakers when it comes to applying AI. Hilton has successfully streamlined their recruiting process and have expanded the scope of AI to other business applications, like digital assistants, for certain critical processes such as feedback and performance reviews. They envision that digital assistants will allow employees to schedule their request for leaves and one the request is made initiate the necessary HR steps. The digital assistant will be available all the time at every location by means of a mobile device or a desktop. Judging by the advantages of AI, the company is looking at AI to focus and help in addressing the needs of, both their employees and their guests.

AI In Employee Engagement

Employee engagement has continued to enjoy center stage when it comes to organization success and correctly so, organizations with high levels of engagement outperform those with lower engagement levels. Employee engagement is the emotional investment that employees make in their organizations. It is visible in how employees perform their jobs and actively contribute to shape the organizational culture. Dr. William Kahn has postulated the idea of Employee Engagement that over the decades has reincarnated into a more holistic concept, employee experience, which covers all the experiences; an employee goes through during his or her employment. It can be viewed as 360 Degree view of the association with the organization. Organizations are more focused on delivering the best employee experience and in this quest are using or shall be utilizing if not already, AI and Machine learning to greater extent.

AI and machine learning enable organizations to gather employee engagement data through multiple channels.
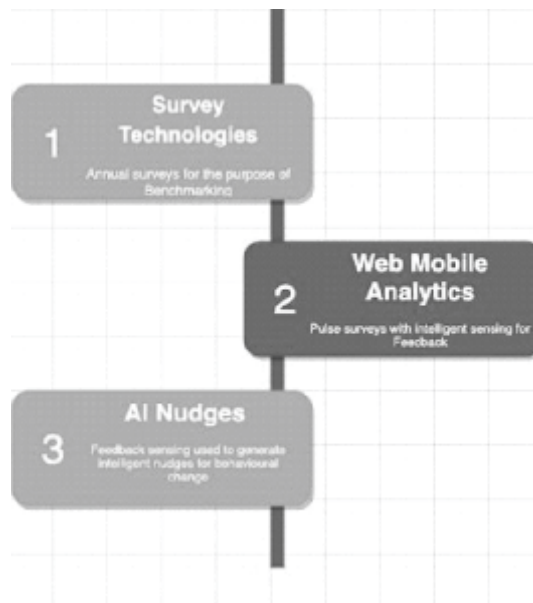

Figure 3: Deployment of AI over Engagement Data

Measuring Employee Engagement with Technology

Sentiment analytics software uses Machine learning to share insights about the key drivers of employee morale and motivation across a vast number of contexts such as compensations, incentives to name a few. It is easier to predict employee needs and behaviors thereby employee can be marked under relevant themes. Chatbots are the new rising sensation as they are being actively used to provide instant feedback. This is more suited for the workforce that is going to comprise primarily of millennials who believe in the concept of instant gratification. Unlike a human chat experience, Chatbots can speedily scan through complex directories produce the information that the employee desires. Such speed and agility would be impossible for a human. This implies that HR

teams can now deliver information such as policy updates, benefits information, leave available, training and development bulletins, employee directories and much more in a matter of seconds. This shall go a long way in enriching the employee experiences as it humanizes the conversations between, HR teams, Employee and the top management. Even thought there is a consensus that engaged employees fuel businesses but HR mangers are unable

to divert the kind of time resources and attention that such engagement requires. AI leaps in to fill in the void. The ability to collect constant feedback goes a long way in the management understanding truly who their employees are and creating positive employee experiences.

AI in Learning and Development

The tapping in of key technologies into HR administration creates a more organization specific focus, gone are the days of one-size fits all. AI can gather insights from scanning vast amounts of employee data coming in and augment it with deep analysis and create customized learning modules. The learning insights so derived shed light on the learning behaviour leading to predictive capacities. Such capacities shall go a long way in creation of smart and well positioned content that is: adaptive and responsive on an individual basis, facilitating better retention.

Chatbots are also being utilized in delivering of trainings; they can deliver huge amounts of information on supporting and other activities even before the employee thinks of it, based on predictive capacities. Another big time and cost saver is Virtual mentoring. It helps track the learner's progress and aids systematic evaluation across the learning journey. They are capable of providing feedback and guidance. The twin advantages of virtual learning are augmenting learning productivity and prescribing targeted training programs. Above all such learning management is cost effective and effective on more than one parameters. HR shall make most use of the key insights generated by use of similar technologies to address gaps in the learning program by re-aligning or re designing them.

How HR is Transforming to Stay Relevant?

According to an estimate, AI shall eliminate 1.8 million jobs while leading to creation of 2.3 million jobs. This imposes a multi- layered challenge on HR managers of the day. First is to interweave such technologies smoothly into the life cycle of their employee and also their strategic fit secondly, begin a re-definition of the current job roles that shall most like be eliminated or transformed. The transformation of the HR function or rather the embrace of technology with the existing duties and strategic goals of the organization as a whole shall be born out of collaborative intelligence between humans and AI. This collaboration hugely enhances their complementary strengths. Humans can gain in leadership, team work and creativity which are not core AI strengths to begin with and humans can benefit from the quantitative and time saving strengths of AI.

As James Wilson and Paul Daugherty have pointed out such a collaboration, shall be based on 5 principles:

1. Reimagine Business processes
2. Embrace Experimentation and Employee Involvement
3. Actively Direct AI strategy
4. Collect data responsibly

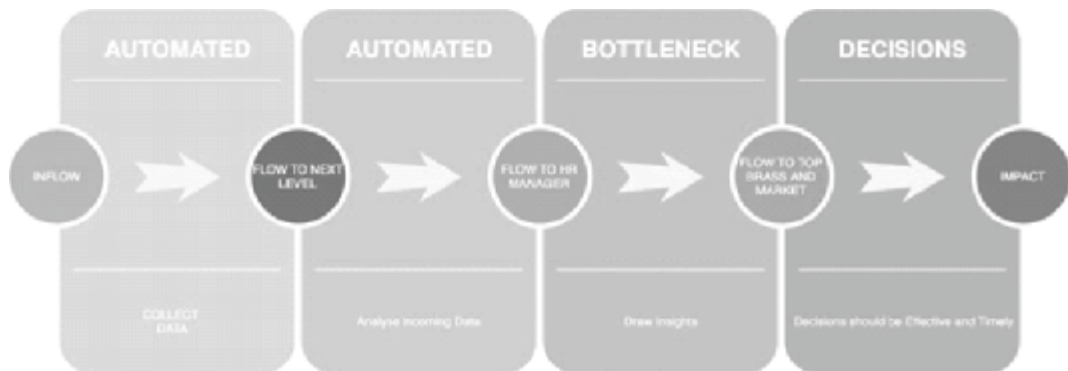5.   Re-design work to incorporate AI and cultivate related AI Skills.

Figure 4: Data-To- Decision Work Flow

It is apparent that AI is all set to transform business, it's just a matter of time depending on how much which organization can pay for such technology. AI stands out from many technologies due to the significant characteristic that it intends to enrich or augment Human effort rather than eliminate it. Just like any other management practice, AI also needs an well managed environment to sustain and produce results. In order to create such an environment, companies shall need people who can explain AI outcomes, and also "sustainers"-employees who continually work to ensure that AI systems are functioning properly, safely, and responsibly.

HR managers, like any other managerial role need to take decisions all the time, this takes a large amount of their time, which they would like to divert to other more relevant issues rather than the redundant. HR agility can not be achieved in the absence of deployment of technologies across HR functions.

It is in the phase of "drawing insights" that a lot of time is spent, and if AI can help to speed up the process of drawing insights by helping extracting data and delivering recommendations in real time then HR can become extremely effective. AI assisted decisions shall be superior on the following accounts:

- Faster at Scale
- Decisions will be more data informed
- Consistent
- Inclusive and Unbiased

Such quality of decisions also becomes the pivot of long-term HR strategies. There is a unanimous agreement that efficiency can be increased by:

- Quality people and their optimal usage
- Considering HR or People Analytics
- Focus on team-centric companies
- Agile workforce

Peter Cappelli and Anna Tavies have already pointed out that HR is becoming "AGILE LITE", that means it is moving away from rules and planning based approach towards a more simpler and faster model driven by feedback from participants. This is being attributed and is being powered by the spillover from rise and rapid advancements in technology. According to Peter and Anna, ninety percent of the organizations in U.S.A. are already using "Agile" practices.

The biggest transformations are happening in:

- Performance appraisals and management when the charade of planning for a year or beyond in advance has been dropped widely. The traditional systems were seen as time consuming, not effective and even faired poorly on their motivational dimension. The major transition has been a movement from iron clad performance appraisal to frequent and more quick performance assessments. Though in this transition there have been many unsuccessful attempts as well. This is where the deployment of technology comes to rescue ensuring that organizations transition to a more specific and quicker ways. Johnson and Johnson, offered its businesses to engage actively in an experiment where they would use a new customized app with which employees, peers and bosses could exchange comments in real time.

- Team management is laden with scrum, as organizations have to deal with multi-directional feedback in new "agile" environments. Many companies use technology to manage the humongous volume of data generated. Apps are designed specifically to allow supervisors, co-workers and clients to share with each other immediate feedback from wherever they may be. Technologies help analyze such conversations providing them a meaningful medium of utilization for better management. CISCO uses proprietary technology to collect weekly data from employees about their peers and monitors deviations.

Jobs and Job roles will need to be revisited, below are a few evident pointers that all organization shall be open to accommodate:

- Organizations shall be ready to embrace more fluidity with respect to their job roles and organizational chart, as strict charts are soon going to become a thing of the past. With the rise of AI powered project based teams, and the nature of the Gen Z workforce employees are more likely to be working as freelancers, consultants or contractors.

- Remote workers are already a common sighting and with the coming of such technologies where employees shall be working from virtual offices, employers will have to work with a larger degree of decentralized work force. This is both an end and facilitator of fluid jobs as cited above.

- Gen Z, like many already, will need to be motivated by a lot of factors not just money. Motivation shall come from creativity, better incentives, and career growth and learning opportunities. Organizations will need to better in providing them and create a culture of life long learning.

- AI and humans shall work together; workspaces will be defined by the co-existence of both. This is a new area of behaviour and people will need to learn to work along side machines and develop a comfort level for such a man-machine relationship. The managers would need to address this area and devise ways to enable employees to get comfortable in the new work paradigm.

- In addition to developing man-machine relationship, people in the modern workplaces can not afford to be complacent about their skills. They would have to

- learn new and newer skills to be responding to reconfigured job roles. Such pro- active adaptation and learning would hold key to the real competitive advantage. Since the life span of skills is going to be extremely short, organizations and employees will continuously need to acquire new skills in order to remain relevant.

- HR managers need to put on their thinking caps for responding to changes in technologies and worker behaviour to review prospective employees' skills and potential to avoid skills that are likely to be automated soon and look for emotional intelligence, critical thinking, creativity and problem solving skills.

Managers will need to hire for skills not specific job roles anymore. Up-skilling and re-skilling will take center stage, as they are already gaining ground.

Pitfalls and future Scope

AI can support three important business needs: automation of processes, gaining insights through data analysis, and engaging with customers and employees.

There is a short distance to go with regard to the transition to greater deployment of technology such as Blockchain, machine learning and AI but the real manifestations of such transition may take a while to become self evident. Such software is expensive and requires massive man and capital requirements. There is major research gap to explore in almost all domains of the application of new technologies to study transition, change management and their resultant effectiveness. This study aims to identify such technologies and highlight the existing practices with regards to the deployment of technologies and resultant changes in HR functions and perspectives. At the onset of moving towards technologies such as AI companies need to understand which technologies are apt for the jobs they wish to apply them to, and also understand the limitations of each.
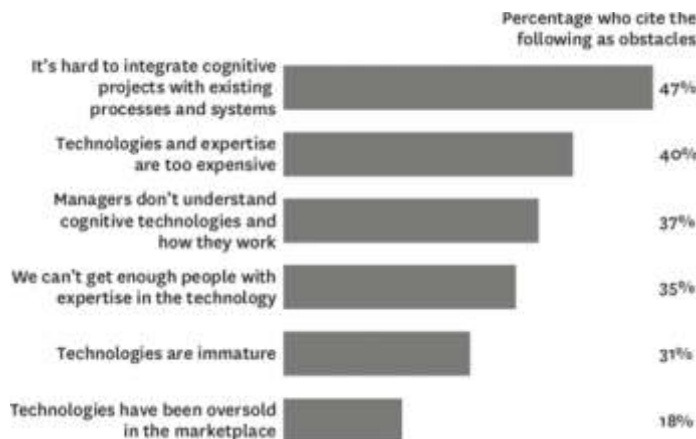

Figure 5: Technology Roll out-Obstacles

Source: Deloitte's 2019

Many organizations have wasted sizeable amount of money and time resources pursuing the wrong technology for the wrong job, a mismatch. The management shall therefore have a good understanding in order to gain strategic and competitive advantage. There exists a shortage of

cognitive talent pool, hence organizations need to establish such pools of talent. In order to create the right match of jobs and required technology, management shall create portfolios of projects. Once projects have been sorted, pilot projects shall be rolled out to verify the applicability and validity of each technology before an enterprise or function wide roll out.

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RESTORING THE SOUL OF BUSINESS STAYING HUMAN IN THE AGE OF DATA

'Restoring the Soul of Business: Staying Human in the Age of Data' is a book worth appreciation. We should express our gratitude to the author for writing an exceedingly pragmatic book which attempts to demonstrate the different methods and techniques that can help individuals and companies to embrace digital technology without losing the most powerful quality of creativity, insight and empathy possessed by humans. Rishad Tobaccowala, the author of the book believes in the idea of blending data and emotions, spreadsheets and stories to inculcate a truly transformational culture and brand that allows both the companies and the individuals to develop in this competitive business environment of data age. Thus, following and leveraging Tobaccowala's suggestions can undoubtedly result in a revolutionary change and development of individuals and organizations. The book has been written in an exceedingly simple and lucid language to bring out the way adopted by great companies to achieve an appropriate balance between their data and story. The author has been very empathetic and has written this book keeping in mind the people who feel dehumanized and for those who have become data myopic. Also, the author has attempted to write a book which is very different from the other non-fiction books, as the author asserts that he has in this book tried to incorporate the answers to those questions which many people have in their mind but have not been answered.

The basic idea of the book, 'Restoring the Soul of Business: Staying Human in the Age of Data' by Rishad Tobaccowala is to make the readers comprehend the ways of unleashing the considerable benefit that can by realized by coalescing humans and machines, analog and digital and also emotions and data. Also, the author firmly believes that organizations by means of establishing proper balance between data driven insights, human intuition and creativity can dig up more profits, revenue and retention, thus resulting in growth of the individuals as well as the organization. This book provides perfect guidance and direction for being different, creative and relevant in transformative times. It talks about growth of the individual, the people around and the company. The author has also articulated the key lessons to become a great leader and also how to deal with or not become, a bad boss. In the world which is increasingly filled with digital, silicon-based, computing objects, the author has been very sensible in making it understand to the readers that this world is also populated by people who are analog, carbon-based, feeling creatures. The author has also talked about two options before any company, that is either upgrade the skills of its people for reimagining the way they work or swap out its people for acquiring new ways of working. Further, the author accentuates that more often both the options are necessary. The main assertion is that successful firms and individuals can never forget the importance of the culture of the organization, people and their emotions and also what cannot be measured that is the Soul of a Company.

The book consists of three sections:

The author has tried very well to answer imperative practical and moral questions which are very

obvious but unanswered in an era when machines are surpassing human beings at the majority of tasks and when there is over reliance of businesses on data.

The first section of the book consists of three chapters with first chapter titled as *Too Much Math*, *Too Little Meaning*. In this chapter, the author has emphasized on filtering the data to separate meaningful information from useless one. He further, highlights the key feature of successful leaders and organizations, who according to him will always attempt to leverage data in such a manner so as to extract and amplify meaning and not just numbers. They will put all their efforts to analyze the data from diverse perspectives. Moreover, the author also believes that it is very crucial to recognize the importance of human judgment and intuition to understand the accurate meaning of data. Moving ahead, the author of the book in the second chapter of the book titled as *Managing the Dark Side of Bright Screens* has talked about the benefits and challenges of today's mobile and networked workplaces. He has deliberated on the issue of challenges of workplace culture, that is how to avoid the feeling of remote and disconnected and also how one can encourage the same in the team. Further, the author firmly believes that it is not a question of whether technology is god or bad but it is a matter of realizing and understanding that how can we make the best use of technology and maximize the best of screen based world and minimize its negative aspect. *The Quest for meaning in the Modern Workplace* is the title of the third chapter of the book in which Tobaccowala has attempted to bring out the importance of good and healthy workplace. Here, the author accentuates that people spend a considerable part of their life at work and moreover to be contented and prolific they try to seek association, relevance and rationale in their jobs. Furthermore, the author utters that these people can find meaning in their jobs if they are provided with an opportunity to grow and build new skills or if they get work that reverberates with them and also if their work helps them in establishing beneficial human relationships. According to the author, the best workplaces cultivate self-resonant, relationship-rich environment and also make an effort to avert motion, math and machine from adulterating these healthy attributes.

Proceeding further to the second section of the book on *Counterbalancing Machines, Screens and Data: Seven keys to Staying Human,* we find that author has written seven chapters in this section with each chapter highlighting one solution to stay human in the age of machines and data. *Talk about the Turd on the table* is the title given to the fourth chapter of the book. In this chapter, the author brings out the importance of other's views. He emphatically comments that successful people and organizations always try to ensure that diverse points of view are heard and considered. Speaking reality to power requires both valor to speak and eagerness to listen. Therefore, companies with trust and relationship building cultures try to promote these behaviors and also create favorable environment for assertive talk and hard listening. Moreover, the author also believes that organizations can facilitate talk about the turd on the table by soliciting nonconforming opinions and encouraging contrasting perspective and give confidence to people even if they are incorrect. Moving ahead, we find that the focus of discussion in the fifth chapter is Change and hence it has been given the title *Address the Reality that Change Sucks*. In this chapter, Tobaccowala has advised the companies to realize that it is impossible to enact any change unless an ardent strategic effort is made in this direction. Besides, he has also recommended three tactics to bring change into action that is promoting new behaviors, exiting people who incapacitate change and continuing the course with investment even with the anticipated financial bumps in the road to change. In chapter six, which

has been labeled as *Unleash Creativity by Inserting Poetry into the PowerPoint,* the author has beautifully attempted to underscore the importance of innovation and creativity by accentuating that the secret of successful people and organizations is that they are able to understand that the artists are entrepreneurs who begin with a blank sheet of paper and outline problems in novel ways and see in a different way, which enthuses innovation and creativity. Progressing to the seventh chapter with the title *Recognize that Talent Does Not Work for Companies but rather Companies Work for Talent,* the author has in very simple words explained that successful organizations are able to recognize that they can grow only if they are able to unleash the potential of their people. In the following chapter the focus of discussion is time and therefore a very apt title for this eighth chapter is *Diversify and Deepen Time Usage.* Here, the author emphasizes that people who measure and allocate time only in numeric and economic terms are committing a mistake. He, in addition, states that it is very important to see how people spend their time rather than only observing the quantity of what people produce during that time. Additionally, the author expresses that to obtain most out of time, organizations ought to sanction doing less and open spaces to do naught. In the subsequent chapter, that is ninth chapter *Schedule More Meetings* Tobaccowala has put in efforts to bring out the importance of meetings and moreover, what should be the give and takeaways from these meetings, as he believes that meetings should leave people energized and motivated. Proceeding to chapter ten with a very catchy title *Upgrade your Mental Operating System*, the author emphatically converses that organizations should reserve time for mental self-improvement of their people by encouraging the employees and giving them an opportunity to break away from digital schedule and engage in tasks and discussions that broaden their intellect.

Finally, in the third section *Fusing the Story and the Spreadsheet: Soul for the Machine Age* the central point of discussion is that machines do not possess souls but people who use them do. The same is reflected in the eleventh chapter *Robots Compute, People Dream*, wherein the author has evidently articulated the idea that people need meaning, purpose and community more than their screens and social media. They tend to do things that do not compute and are stimulated by things that do not fit in algorithms. Consequently, the author gives emphasis to focus on goals beyond the immediate and measurable, if sustained success is the goal.

Finally, in the twelfth chapter *How to Lead with Soul* Tobaccowala has talked about the continuous journey of becoming a good leader. He has shown his firm faith in the idea that leaders need to continuously learn from both spreadsheet and story and also from screens and people.

Concluding the book, the author reverberates that it is quite apparent for the advances in technology and science to improve the lives of people if they are able to identify and manage the associated perils. Ultimately, it is the people and dreams that matter and hence companies must by no means forget the soul that drives them.

BAD CHOICES
HOW ALGORITHMS CAN HELP YOU THINK SMARTER AND LIVE HAPPIER, REVIEWS

By Ali Almossawi, Viking, Pages 160

Bad Choices, they say, make good stories, and so has this one by Almossawi. Notwithstanding the significance of algorithms in our lives, most of the books on the subject talk about the 'how' of it, rather than 'why'. The word algorithm thus scares those who are not comfortable with the complicated intricacies and thus lose out on the applicability of algorithms to solving simple everyday tasks effectively. Algorithms open up a number of different ways in which a problem can be approached and a solution to it could be obtained. This book, the author says, aims at acquainting the reader with algorithmic thinking by focusing on varied approaches to day to day tasks and comparing their outcomes. It also is a good reference for those who get into the complexities of algorithms while forgetting to notice their applicability in mundane tasks to make them faster and simpler.

The author is a principal engineer at Apple and was earlier a data visualization engineer for Mozilla. An alumnus of MIT's Engineering Systems Division and Carnegie Mellon's School of Computer Science, Ali's prior stints include working as a research associate at Harvard and as a collaborator with the MIT Media Lab. He has several publications on critical thinking and computer science education.

The book has 12 chapters, each set in an au fait scene which has a number of impending tasks to be done. The tasks and the scene are each described using a sketch, a paragraph, and description of a minimum of two ways of carrying out the task, one slower and the other faster. That represents Ali's way of presenting algorithms to help the reader think smarter and live happier! The good choice for getting the task done the author suggests effectively, is the algorithmic way which gets things done faster. An interesting set of examples about well-known scientists having drawn motivation for their incredible breakthroughs from very simple everyday happenings is very stimulating for the reader, as is the quote by Norton Juster at the beginning of the book.

In the introduction to the book, the author highlights the significance of relative magnitudes while hoping that the book impresses on the reader the skill to think about decisions and the associated tradeoffs, and consequently their behavior better. Ali also justifies the approach to focus on accomplishing everyday tasks using algorithms as it is relatable, interactive and acknowledges multiple outcomes.

Match those socks, the first chapter, addresses the problem of matching the pairs of socks from a pile of clothes. The author as per the format, describes the scene, the task, and the alternative solutions. Reference to the movie Momento, and the game of 'Go', emphasize the importance of memory in carrying out the task faster. The readers get to learn match and pile as the first and slower method, and the concepts of array, lookup, cache, key-value pair and pigeonhole principle through the second method of matching the pairs. Bringing in the card matching game of Memory to explain socks matching and arrays, very subtly moving on to the description of the more complicated techniques of hash tables, hashing, constant-time lookups and then handing over a some exercises on the topic gently while mentioning a TV show and a word game is a smart way of packaging learning in just two

pages and still maintaining the focus.

In chapter 2, Find your size, the emphasis is on search, linear and binary. The concept is explained through the search for the right sized shirt from a large collection. The author has very simply explained the difference between linear time and logarithmic time. Learners get to understand logarithmic time through common examples such as word search in dictionary, telephone number search in telephone directory (this though is an obsolete item for Gen Y), and topic search in book index. And as the searcher, Eppy, finds a shirt, the reader comprehends exponential, linear and logarithmic searches.

Pop to the shops is about the data structure, stack. The main character of the story of chapter 3, wants to minimize his trips to the shop because he is scared of the neighbour's dog and we are told how stacks could be of help. As throughout the book, the authors brings in very familiar day-to-day tasks such as washing of dishes, cutting onions, hole punching papers from multiple reports, and destination dispatches via elevators in high-rise buildings. The sequence in Two Ronnies is another situation that helps in clarity with the concept.

In Bring him home, chapter 4, the situation is that of a tailor willing to find his way to the front of his huge shop through the messy maze of shelves, walls and passages. The reader is taken through the stories of Minotaur and Ariadne, Charles Darwin's research for his publication 'On the origin of species', reference to Tremaux's algorithm, robot vacuums, common apps and websites to explain the maze solving approaches and thus the concept of network or graph.

Charlie Magna a post man has spilled over his mail on the road, all letters have mixed up and he now has to Sort that post, that is the fifth chapter for us! The title and the situation help the reader guess, it must be about sorting, it is. Insertion, selection, merge, quick and bubble all find reference and also the terms linearithmic and quadratic time are discussed to explain sorting.

Likewise each chapter follows the pattern, and the pattern gets a little weary for the reader, as may have been experienced in the summary cum review so far. Though Almossawi, doesn't, this review changes the pattern here.

The problems addressed are all very relevant and the idea of relating them to a common, familiar problem, creative, however, as the reader reaches the middle of the book, a sense of not carrying out the tasks in the manner explained builds up and the reader tends to get entangled in the technicalities which the author intended to avoid, not that the simplicity of the descriptions is not appreciated.

Be more hip deals with link analysis, matrix multiplication and refers to recommendation systems for Foy to listen to influential music. Update that status is to the address problem everyone seems to be facing these days, adhering to the 140 character limit. Huffman Coding and Data compression are effectively explained in this chapter. To Get the jobs done, pipelining, context switching, greedy approach are discussed. Fix that necklace is about linked lists and doubly linked lists which are explained through the situation of inserting a bead in a necklace at a specific location.

The next three chapters Locate that box, Fill those shelves, and Navigate those aisles deal with the complex concepts of big theta, big omega and big O notations, quick sort, and binary search trees respectively, taking the reader through them comfortably. In the process, multi-dimensional arrays, hash tables, chaining, collision, library sort, priority queues an heaps get introduced finely and efficiently.

The author has given very thoughtful references to learn more about the concepts discussed in this

book. The brief description on rates of growth is good and the graphical summary is awesome.

Learners will find the delivery of concepts easy, and teachers can take the situations to their classrooms. Non-technical readers can pick a trick or two for faster decision making. The book is good reference material for refreshing theories learnt in the past. All in all it is a good read to get the concepts of algorithms and computational thinking and identifying situations where these can be applied.

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