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CONTENTS

Editorial

The role of technology in business education is changing rapidly. In the past, technology was used primarily to deliver content and facilitate collaboration. However, in recent years, technology has become increasingly sophisticated and is now being used to personalize learning, provide real-time feedback, and automate tasks.

This shift is having a profound impact on the way business education is delivered. For example, personalized learning permits students to synch their learning pace and focus on their priority needs where the help is required. Real-time feedback helps students identify and correct mistakes early on, which can lead to improved learning outcomes. And automated tasks give free time to teachers so they can focus on more pressing areas that requires their time.

As technology continues to evolve, it is likely to influence on business education. As time progresses, we can expect to see even more sophisticated technologies being used to personalize learning, provide real-time feedback, and automate tasks. This will allow students to learn more effectively and efficiently, which will prepare them for the challenges of the 21st century workplace.

Here are some of the indicative changes that the evolving technologies can bring in business education:

Personalized learning: Technology can be used to personalize learning for each student by providing them with content and assessments that are designed as per the individual requirements. This can ensure the process of student learning to become more effective and efficient.
Real-time feedback: Technology can be used to offer students a real time inputs about their learning process including any assignments and works. This can help them track the learning and to rectify the mistakes if any.
Automated tasks: To carry out the routine academic activities that are performed by human teachers such as valuating papers and preparing lesson plans, may be taken over by technology allowing human teachers to focus on higher priority tasks.
New learning opportunities: Technology can be used to create new learning opportunities that were not previously possible. For example, AI help to create a simulations based on virtual reality exposing students to alayse different business scenarios.

Overall, technology is likely to have a positive impact on business education. By personalizing learning, providing real-time feedback, automating tasks, and creating new learning opportunities, technology make students learning more effective and efficient. This can prepare them for the challenges of the 21st century workplace. Besides, the emerging AI may pose few challenges too as discussed below.

Here are some of the challenges that technology poses to business education:

Cost: Technology can be expensive to implement. This could make it difficult for some schools to afford AI-powered learning tools.
Bias: Technology systems can be biased, which could lead to unfair treatment of students. This is a major concern that must be explored well in advance that AI is largely adopted in education.
Ethics: There are ethical concerns about the use of AI in education. For example, some people worry that AI could be used by students in cheating assignments and homeworks. These concerns need to be carefully considered before AI can be used in education.

Despite these challenges, technology has the potential to make a significant positive impact on business education. By addressing these challenges, we can ensure that AI is used to benefit students and improve the quality of education.

Prof. (Dr.) Uday Salunkhe
Editor in Chief

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RESEARCH

FLEXIBLE WORK ARRANGEMENTS AND ITS IMPACT ON WORK-LIFE BALANCE

Anurag Shanker*

ABSTRACT

"*Flexible work arrangements" is a strategic part of the ecosystem of progressive organizations. There has been exponential increase in organizations that offer flexible work arrangements to their employees. Flexible work arrangements encompass various components which individually and collectively help in improving the overall wellbeing of the employees. The relaxations provided under flexible work arrangements improve the work-life balance of the employees significantly.*

Keywords: *Flexible Work arrangements, Benefits, Work-Life Balance, Stress, Wellbeing*

INTRODUCTION

Many organizations are offering their employees "flexible work arrangements" [1]. Scholars claim that flexible work practices facilitate work-life balance for the employees [2, 3, and 4]. In this paper, "flexible work arrangements" will be dissected into its various components and an effort will be made to establish their impact on employees' work-life balance. In the conclusion, an inference will be drawn how "flexible work arrangements" holistically impact "work-life balance" of the employees.

FLEXIBLE WORK ARRANGMENTS

"Flexible work arrangements" mean an employee's ability to change the schedule and place of his work shift. It also entails flexi-time working, compressed working hours, job sharing, sabbaticals, telecommuting and childcare provisions [5 and 6].Each of the arrangement could be used individually; or they can be combined to complement each other [7].

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FLEXIBLE WORK ARRANGEMENT COMPONENTS

Flexi-time working empowers employees to decide their check-in and check-out time of their work shifts.

Part-time working is one of the most common types of methods in which employees are agreeing to work less number of hours than the full-time.

Compressed working hours allows employees to work his hours over four days in a week instead of five.

Job-sharing is a mechanism under which two employees having the same job share the job and split the hours so that each one has a part-time position. They also split the remuneration, holidays and fringe benefits.

Sabbaticals allow employees to take career breaks for various purposes.

Telecommuting allows employees to do their job by using information and communication technology without being physically present at the workplace.

Childcare options are a means to help employees' with adequate care of their children when both the parents are at the workplace away from home. This may include crèche facility and day nursery for the children.

BENEFITS FOR THE ORGANIZATIONS

Organizations introduce "flexible work arrangements" as part of their work-life balance policy. Flexible working helps organizations in attracting, recruiting, and retaining highly qualified employees [8]. Flexible working leads to increased productivity, increased profitability, reduced employee turnover and absenteeism rate [9].

BENEFITS FOR THE EMPLOYEES

The various components of **"flexible work arrangements"** benefit employees in different ways. **Flexi-time** helps an employee to look after his personal activities without having to take time-off from work. **Compressed working hours** lead to additional free time for the employee during the working week. **Job-sharing** allows employees sufficient time to attend to their personal chores. **Sabbaticals** give employees career breaks and help them achieve work-life balance. **Telecommuting** allows employees to work from their home by using information and communication technology. This helps employees to look after their family and other personal chores. **Childcare** measures extended by employers help their employees achieve work-life balance, particularly in the backdrop of dual earning families. Therefore, all the benefits flowing from different components of the "flexible work arrangements" help employees in achieving work-life balance [10].

WORK-LIFE BALANCE

Work-life balance can be defined as "satisfaction and good functioning both at work and at home with a minimum of role conflict". Work-life balance is a wide ranging concept involving proper prioritization work and personal life. It is essentially balancing between responsibilities at workplace, family responsibilities and leisure. It is, however, challenging to achieve work-life balance in this unpredictable and rapidly changing world today [11, 12 and 13].

RELATIONSHIP BETWEEN FLEXIBLE WORK ARRANGEMENTS AND WORK-LIFE BALANCE

In the foregoing part of this paper, an attempt has been made to define broad components of "Flexible work arrangements". However, flexible work arrangements may mean different things to different people. In general, flexibility in one's work schedule typically depends on the life stage of the person. Employees who ask for flexibility in their work schedules include mothers with young children, people reaching retirement age, but who do not want to quit completely yet, and adults who are caring for their aging parents. People also ask for flexible work schedule who are going through major life change. For example, someone who is dealing with a loss of close family member or someone who is sick and needs accommodations for doctor's appointments and treatments may need to have a flexible schedule for a short period or indefinitely. The idea of having a flexible work schedule is seen as a positive motivating factor that can lead to increased happiness and overall wellbeing which in turn promotes better work-life balance. It may therefore be fair to infer that implementation of flexible work arrangements have a positive relationship with work-life balance Opportunity for flexible work arrangement influence productivity, performance, job satisfaction as well as organizational commitment on the part of employees [14].

Flexi time give opportunities to the employees to accommodate their personal needs [15].

Part-time working empowers employees to work continuously while increasing their leisure time [16]

In compressed working, the employee can start work early and finish late so that they can build up additional hours and get a leave for a day from the work. This helps an employee enjoy a longer weekend / more time away from work without a reduction in pay. This promotes their mental and physical well being, which in turn leads to work-life balance [17].

In job-sharing, two employees share a job and split the remuneration as well as other fringe benefits proportionately. In case of personal exigencies, either one has the leeway to remain absent from work [18].

In telecommuting, all or part of the duties, tasks and responsibilities of the employees are carried out by them from their home using information and communication technology. It helps employees save on travelling cost and time, allow more flexibility in the working hours and consequently leads to increase in the job satisfaction [19].

WELLBEING AND WORK-LIFE BALANCE

The definition of wellbeing is associated with health and wellness. It may be observed that all components of flexible work arrangements and the benefits for the employees flowing from them lead to physiological and mental wellbeing. Researchers have suggested that physiological and mental wellbeing significantly help to promote work-life balance [20 and 21].

DISCUSSION

Flexible work arrangements have been introduced in various organizations from time to time to improve the overall wellbeing of its employees so that their productivity increases and consequently the profitability of the organization. Research reveals that workplace flexibility empowers employees to control when, where, and how much time they should spend working so that they get adequate time to satisfy their non-work needs. This kind of arrangement induces a sense of mental peace and propels them to give their best to the organization. Each and every component of flexible work arrangement contributes to satiate those human needs, which leads to improved work-life balance of the employees.

CONCLUSION

This paper examined the relationship between flexible work arrangements and work-life balance. It showed that flexible work arrangements improve physiological and mental wellbeing of the employees. This helps employees to strike an optimum work-life balance which leads to greater output, commitment and loyalty towards the organization. It may therefore be inferred that prevalence of flexible work arrangement creates a positive impact on work and non-work lives of the employees. Looking to the benefits that accrue from a healthy work-life balance, the policy of flexible work arrangement is a win-win situation for the employees as well as for the organization.

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RESEARCH

A STUDY ON EMPLOYEE ATTRITION TOWARDS SUSTAINABLE ORGANIZATION IN IT & ITeS INDUSTRY

Prof. Dr. Vandana Panwar, Jeby Roy*

ABSTRACT

Information Technology (IT) sector is staring at another major wave of employee attrition (Verrendra, 2019). The industry is experiencing the slow growth of single digit and fat middle of companies. The change in technologies has led to a large fleet of obsolete workforce (Balakrishnan, Former CFO, Infosys). The greatest challenge for an HR manager is high attrition rate after performance management in the organization. With the rapidly changing society, government, culture, technology, communication and the legal landscape – a causal mechanism is required to study the changes in the variables that determine an employee retention in a company. The is aimed to study the causes of employee hopping in Indian IT & ITeS industry with special focus on IT & ITeS companies in Mumbai & Thiruvananthapuram city of Maharashtra and Kerala states in India. The primary data was collected through random sampling of 146 employees from two cities with a structured questionnaire (5 point Likert scale). A non-parametric test of one factor with more than 2 samples groups is used to analyze the reasons of employee attrition. Statistical tools used–Pearson Chi-square, AVOVA and Regression analysis using SPSS. The results shows that the most important organizational reason for attrition is lack of compensation and benefits followed by lack of career growth, absence of favorable working environment, mismatch of job profile, stress & work like balance and employee expectations towards job. The research contribution is in the form of strategic roadmap based on empirical data. The present study could be further extended to make a cross continental research, multi-dimensional analysis and Inter Continental and intra Continental research.

Key words: *Employee attrition, sustainable organization, IT, ITES, Thiruvananthapuram, Mumbai*

JEL Classification*- M1, M120, M150*

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INTRODUCTION

Information technology (IT) is imperative not only for the development of modern industries but for the general well-being of the State (UNCTAD, 2018). India is a pioneer in software development which makes it a favorite destination for IT & ITeS (CII, 2019). The fast-growing Indian IT industry has gained importance in the global market. It contributes around 7.7 per cent to the country's GDP. It is expected to touch 10 percent by 2025(IBEF, September 2019).

The human resource department keeps evolving to meet the demands in a fast –paced and digitally driven environment. Every year there is a new and distinct set of challenges for the employers. With the rapidly changing society, government, culture, technology, communication and the legal landscape – the employers and the workplace get affected (Gulati & Bishnoi, 2011), (Florentine, 2019). Firm's performance and internal culture is affected by the loss of key employees (Mehdi, Raju, & Mukherji, 2012). The greatest challenge for an HR manager is high attrition rate after performance management in the organization.

Intensive literature on research and findings over a span of last twenty years has been undertaken by the author to have a grip of the concept and to understand the thought process behind similar studies. Employee attrition has been seen across the industries - manufacturing (Latha), defence PSUs (Dobhal & Nigam, 2018), ITES call centers (kaur, 2014), IT sector (Gupta, Kumar, & Dr. Seemarani, 2015) , education institutions (C, Chand, & R, 2016), Construction (Ismail & Varghese, 2019), Telecom service providers (MD & Menon, 2012), BPO (Bhargav & Mehra, 2018) etc.

Many of the studies also focus on the retention strategies (Mathimaran & Ananda Kum, 2017), (Raj & Brindha, 2017), (Sequeira & Lewis, 2012), women workforce (singh, Ganguli, & David, 2017), HR practices & challengers, The behavior of the superior also have a adverse effect on employee (Mehdi, Raju, & Mukherji, 2012), Less work and more employees create imbalance in the IT industry (Bennett, 2018), Stumbling growth in IT attrition (Bhusan & Kagzi, 2014) etc.

For any organization an employee is the most important asset. With advancement in technology, it is difficult to predict the human resource requirement and availability. According to the report of NASSCOM, attrition rate is between 15 percent to 30 percent, which may increase in the times to come.

In Human Resource Management terminology, the phenomenon of the employees leaving the company is said to be Attrition(Saini & Venkat, 2014). The metric used to measure is called attrition rate. It measures the no of employees voluntary resigning or laid off by the company. It is also referred to as churn rate or turnover. Attrition can be calculated as: Attrition (per months) percent = {[No. of separations in the given month/Average headcount in the given month] *100} (Kimberlee, 2019).

Employee departs from an organization with a momentous motive (Kumari, 2018). The frequent reasons as opined by Career Systems International (2010), (Deloitte, 2015), (Miligan, 2017) , (Gong, Greenwood, Hoyte, & Ramkrisoon, 2018) , Boswell et al. (2005), can be employee's expectation towards job, mismatch of job, making a difference, lack of growth opportunities, new job offer, career growth, learning development, fair pay, supportive management, lack of trust and support in coworkers, being recognized , compensation, valued and respected, meaningful work, pride in organization, autonomy, Job security, challenges, individual performance etc.

Many employees leave the organization in a very short duration due to many reasons, both personal and professional. Lot of cost and time is added to find the new employee in the short period (Sengupta at el 2012). It is also very unprofitable for the organization in the long run (Das and Baruah, 2013).

Allen and Meyer (1990), has emphasized on high level of stress which disturbs the mental peace. Lack of growth opportunities is also a reason for attrition. (Bhusan & Kagzi, 2014) suggested organizations to have balance of healthy growth, HR policy and laid-out strategy to control the attrition rate. The common benefits of Health and retirement programs have now changed to more flexible and individualized benefits. (Miligan, 2017) opines Technology moves work beyond the office and career development is more Agile and analytics has changed the game slowly. It is observed that there is a shortage of talented employees at the middle and senior level in the organizations.

In BPOs, less skilled people are required as stated by Agrawal (2004), (Arora et al., 2001).Despite of many researches in smaller groups and on broader groups , it is challenging to retain the suitably skilled employees.

RESEARCH GAP

With rapidly changing society, government, culture, technology, communication and the legal landscape – a causal mechanism is required to study the reasons and changes in the variables that determine an employee attrition in a company.

The need for study in IT and ITES industries for employee attrition is firstly due to the rate of attrition rose to 23.4 percent in the June quarter, 2019 (TOI, 2019). Secondly, the cost of attrition is very high and which takes the profits of the company (Richtsmeir, 2018). Thirdly, employee turnover rate is very high with special reference to skilled employee and can lead to bringing projects to a standstill situation (Kluwer). Fourthly, the cost and time for replacing an employee are increasing and will affect the company reputation (Eccles, Newquist, & Schatz, 2007). Thus, HR administration is facing various management issues in the organizations.

Several studies have been conducts at both macro and micro level dealing several aspects of attrition. But they have not conducted any study specific to Kerala and Maharashtra especially in the context of It & ITeS companies. Thiruvananthapuram city is a major Information Technology hub in Kerala. As per the Kerala Economic Review, it contributed 55% of the state's software exports (Government of Kerala, 2018). TCS, Infosys, Wipro, UST Global, Livares technologies Pvt ltd (LTI), Cognizant technology solutions, EY, Oracle India Private Ltd, etc are some of the top IT organizations. Mumbai is the headquarter of India's Largest IT company -Tata Consultancy Services. The companies like L&T Infotech, Datamatics, 3i Infotech, Patni, Mastek and Oracle FinServ also have their offices in Mumbai city.

RESEARCH PROBLEM & RESEARCH QUESTION

The literature reviewed and the gaps that have been identified, in present IT and ITES industries, Employee attrition is one of the prior and dynamic challenges. The organizations are not focused towards active administration and HR trends for sustainability. The research question is- "What could be the possible reasons for employee attritions in Indian IT & ITeS industry?". The aim of the paper is to study the reasons of employee attrition in Indian IT & ITeS industry with special focus on IT & ITeS companies in Mumbai & Thiruvananthapuram city of Maharashtra and Kerala states in India.

The sub-objectives of the study are as follows:

To analyze the impact of lack of career growth on employees

To study the impact of Stress and work-life balance on employees

To analyze the impact of employee's expectation towards job

To analyze the impact of mismatch in job profile on employees

To analyze the impact of lack of proper compensation and benefits on employees

To find out whether the absence of conductive working environment affects the employees.

RESEARCH HYPOTHESIS

With the primary objective to know the possible reasons for employee attritions in IT & ITeS industry, the author has established assumptions to facilitate the investigation.

The alternate hypotheses are as follows:

H_a1-Lack of career growth does not influence the attitude of employees adversely.

H_a2- Stress and family responsibilities does not influence the employee morale.

H_a3- Employee's expectation towards job does not influence the employee retention

H_a4- Job profile does not influence the employee retention.

H_a5- Proper compensation and benefits does not influence retention of employees.

H_a6- Conducive environment at work place does not lead to retention of employees.

RESEARCH METHODOLOGY

For determining the causes for employee attrition among IT & ITES industries secondary and primary data was collected. The secondary data was collected through various resources like International and National Journals (HRM and HR Development), Strategic Review, NASSCOM, Ministry of Skill Development and Entrepreneurship (MSDE) and National Skill Development Corporation (NSDP).

For the primary data, Non-parametric method-Simple Random Sampling technique through Survey - Questionnaire to the targeted sample of 200 IT professionals as respondents. Based on the literature survey following six variables has been identified to measure employee attrition:

<u>Career Growth</u> – With the fast- driving requirement of IT professionals, people look for better options for fulfilling their expectations in the contemporary organizations as opined by Robbins (2003) Akila,R (2012), Dod etal (2011), De and Dutta (2007).

<u>Stress and Work-life balance-</u> Employees are creative, productive and happy when satisfied with their current job. With the changing demand, employees have to keep them updated with the latest technologies. Tymon et al (2011),Mehta (2006) Kulshreshtha and Kumar (2005), Kossivi et al. (2007) in their study indicated that work –family balance is desired by an employee to reduce strain, enhance opportunities and to retain the loyalty as employee.

<u>Compensation and benefits</u>- Goud, P.V (2014), Raychaudhuri and Farooqi (2013), Key and Jordan (1999), stated that employees prefer flexible benefits to be retained in the organization.

Working environment -Raychaudhuri and Farooqi (2013), Nazia and Begum (2013), Martz and Griffeth (2004), stated that with the changing environment, organizations invest lot of time and resources to train employees for unexpected challenges. A good, healthy working environment is always expected by employees to stay for a longer time.

Expectations towards job- What do people look for in a job. People expect the right type of work, security, company, coworkers, supervision etc.

Mismatch in job profile- When the job does not correspond with his/her level of education, experience, skills or interests- it is termed as mismatch in job profile.

DATA COLLECTION

The population of the study includes the organizations working with IT Services, Software Product and Services in IT & ITES Industry in Thiruvananthapuram and Mumbai. The primary data was collected through simple random sampling technique. In the phase one 20 employees were surveyed for Pilot study through a self-structured questionnaire. Based on the feedback of the pilot study, minor changes were made to improvise the questionnaire for the final survey.

The Final survey was conducted in Thiruvananthapuram and in Mumbai during the months of January -March 2019 in both the cities. The final questionnaire consists of two parts-Part A: Employee demographics and Part B had questions related to the greatest HRM challenges, reasons that influence the employee attrition. The questions were ranked on a five-point Likert's Scale, where: 1= Strongly agree, 2=Agree, 3= Neither agree nor disagree, 4=Disagree, 5= Strongly Disagree.

The Final questionnaire was distributed to 200 IT professionals. The precision rate of 10 percent and Confidence level of 95 percent were taken as benchmark for the study. Due to busy schedule and financial year end a size sample of 146 respondents were collected. The survey was conducted in such a way that proportionate representation and due weightage was given to different IT companies in both the cities.

Non-parametric tests of one factor with more than 2 samples groups is used to analyze the reasons of employee attrition. Statistical tools used– Reliability Test of questionnaire, Pearson Chi-square, AVOVA and Regression analysis using SPSS.

ANALYSIS AND RESULTS

DEMOGRAPHICS OF RESPONDENTS

Demographic profiles details of the sample - 146 respondents are mentioned below. Majority of these employees belong to IT organizations like-Infosys, TCS, Oracle, Wipro, EY, Cognizant in Mumbai and Thiruvananthapuram.

Table 1: Demographic Profile of Respondents

Characteristics	Profile	Frequency	Percentile
Gender	Female	72	49.3
	Male	74	50.7
Age Group (In years)	Upto 30	119	81.5
	31-40	22	15.1
	41-50	2	1.4
	51-60	2	1.4
	Above 60	1	0.7
Length of Service (Experience in years)	0-1	14	9.6
	1-2	27	18.5
	2-3	42	28.8
	3-5	41	28.1
	5	22	15.1
Permanent Employee	No	8	5.5
	Yes	138	94.5
Employee attrition recognized as a HR challenge	No	51	34.9
	Yes	95	65.1

Source: Author Data

Mean Scores

Table 2: Reasons of Attrition-Overall Mean Scores

Reasons of attrition	Normal	Mean	SD
Lack of Career Growth	146	0.527	0.041
Stress and Work - Life balance	146	0.555	0.041
Employees' expectations towards job	146	0.640	0.050
Mismatch in job profile	146	0.336	0.039
Lack of proper compensation & benefits	146	0.466	0.041
Absence of conductive working environment	146	0.349	0.040

Source: Author Data, SPSS generated output

Table 2, highlights the mean scores of the reasons for attrition. Out of six variables, Employee's expectation towards job has highest mean value (mean=0.640, SD=0.050). Stress and work-life balance (mean= 0.555, SD= 0.041), lack of career growth (mean= 0.527, SD= 0.041), lack of proper compensation and benefits (mean =0.466, SD=0.041), absence of conductive working environment (mean=0.349, SD= 0.040), and mismatch in job profile (mean=0.336, SD=0.039) follows in order.

REGRESSION ANALYSIS

To determine which reason is having more influence on attrition, regression method was used, in which the independent variables were- lack of career growth, stress and work-life balance, employee's expectations towards job, Mismatch in work profile, lack of appropriate compensation and benefits and absence of conductive working environment.

Table 3: Regression Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.256[a]	.065	.025	.472

a. Predictors: (Constant), Absence of Conductive Working Environment, Mismatch In work Profile, Lack Of appropriate Compensation and Benefits, inadequate career growth, Stress - Work Life Balance, Employee Expectations Towards Job

Source: Author Data, SPSS gene rated output

From this summary (Table 3), the R square value is .065 and adjusted R-square value is 0.025. The R-square value of 0.065 indicates that the six considered determinants explain about 6.5 percent of the variance in attrition.

Table 4: Anova (factors And Attrition)

ANOVA[a]						
		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.170	6	.362	1.621	.146[b]
	Residual	31.015	139	.223		
	Total	33.185	145			
a. Dependent Variable: Employee Attrition a recognized HR challenge						
b. Predictors: (Constant), Absence of Conductive Working Environment, Mismatch In work Profile, inadequate Compensation And Benefits, lack of desired career growth, Stress And Work Life Balance, Employee Expectations Towards Job						

Source: Author Data, SPSS generated output

The results of table 4 indicates that the F-statistics (1.621) is large. The p-value is=0.146 which is greater than 0.05, leading to acceptance of the null hypothesis and rejection of the alternate hypothesis. Thus, it was found that there is significant difference between the reasons of attrition.

Table 5: Regression Coefficient (RC)-

Factors affecting Attrition.

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	90.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	533	.098		5.417	.000	.370	.695
	Lack of career growth	.107	.081	.112	1.328	.186	-.026	.240
	Stress & Work Life Balance	-.017	.082	-.018	-.208	.836	-.154	.119
	Employee Expectations Towards Job	-.085	.083	-.089	-1.033	.303	-.222	.051
	Mismatch In Job Profile	.029	.087	.028	.332	.741	-.115	.172
	Lack Of Proper Compensation And Benefits	.206	.079	.215	2.592	.011	.074	.337
	Absence of Conductive Working Environment	.042	.086	.042	.489	.625	-.100	.184
a. Dependent Variable: Employee Attrition a recognized HR challenge								

Source: Author Data, SPSS generated output

As estimated in the Table 5, estimated regression model is:

Y(A) = 0.533 +0.107(X1) + -0.017(X2) + -0.085(X3) + 0.029(X4) +0.206(X5) + 0.042(X6) + E

Where A= Attrition

X1= Lack of career growth

X2= Stress and Work Life Balance

X3= Employee Expectations Towards Job

X4= Mismatch In Job Profile

X5= Lack of Proper Compensation and Benefits

X6= Absence of Conductive Working Environment

From above analysis, regression coefficient (RC) for inadequate career growth is 0.107, which means that one-unit variation (increase) in career growth results in 0.107-unit variation (increase) in intention level if other independent variables remain constant. The t value is 1.328 and significant at 0.186, implies that inadequate career growth can add to attrition. .

The RC for Stress and work life balance is -0.017, which indicates that one-unit variation (increase) in Stress and work life balance results in -0.017 unit variation (decrease) in attrition level if other independent variables remain constant. The t value is -0.208 and significant at 0.836, implying that stress and work life balance have negative impact on attrition.

The RC for employee expectations towards job balance is –0.085, signifying that one-unit variation (increase) in employee expectations towards job results in (–0.085) unit variation (decrease) in attrition level if other independent variables remain constant. The t value is -1.033 and significant at 0.303, indicates that employee expectation towards work has negative impact on attrition.

The RC for mismatch in job profile is 0.029, signifying that one unit variation (increase) in job profile leads to 0.029 unit variation (increase) in intention level if other variables independent remain constant. The t value is 0.332 and significant at 0.741, indicates that mismatch in job profile has positive impact on attrition.

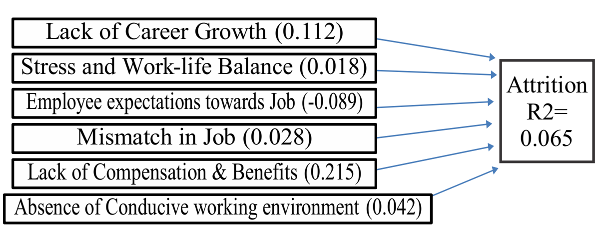
The RC for lack of compensation and benefits is 0.206, signifying that one-unit variation (increase) in lack of compensation and benefits results in 0.029 unit variation (increase) in intention level if other variables independent remain constant. The t value is 2.592 and significant at 0.011, signifying that lack of compensation & benefits has positive impact on attrition.

The RC for absence of conducive working environment is 0.042, indicating that one-unit variation (increase) in absence of conducive environment results in 0.042 unit variation (increase) in intention level if other variables independent remain constant. The t value is 0.489 and significant at 0.625, means that absence of conducive working environment has positive impact on attrition.

FINDINGS AND SUGGESTIONS

The statistical analysis of the data indicated that the organizational determinant like less than expected career growth, stress & work-life balance, expectations towards job, mismatch in job profile, inadequate compensation & benefits, absence of conducive working environment have close correlation with the attrition of professionals in IT sector.

Figure 2: Regression Model for Factors and Attrition



Source: Based on Primary data – model framed by author, Significant at 0.01 levels.

It can be seen that the most important factors of attrition is lack of compensation and benefits, (beta= 0.215) followed by lack of career growth (beta= 0.112), followed by absence of conducive working environment (beta= 0.042), followed by mismatch of job profile (beta= 0.028), followed by stress & work like balance (beta= - 0.018) and employee expectations towards job (beta= - 0.089).

Therefore, one of the three most important organizational factor for the employee attrition in Thiruvananthapuram and Mumbai in IT industry is lack of compensation and benefits. When employees do not find the things as per their expectation, they leave the the organization. The rate of attrition among the young skilled employees in digital technologies is doubling. (Basu, 2019) suggested software services providers to control the rate of attrition by providing better salary, bonus, promotion, reskilling opportunities, career growth etc..

Lack of career growth is the second important organizational factor for IT employee leaving their job. If the employees do not see their organization investing in their future, they start looking somewhere else.

Another important organizational predictor is absence of conducive working environment. Employees are the life-blood of any organization. What they collectively do in eight to nine hours a day at work is reflected in the business performance. (Hung, 2018) It impacts employee morale, productivity and engagement - both positively and negatively. (Chandrasekar, 2011).

Some of the other findings of the present study on employee attrition are as follows:

Most of the companies are focusing on performance management of the employees to achieve an excellent growth structure.

The most susceptible category that is inclined to employee attrition is middle level management and it is followed by the junior level management. It is also noted that, there is a trend to shift from one company to another with an experience of 1-2 years.

Promotion and training opportunities has a positive correlation as the most preferred options to forego the percentage hike in package. It was also observed that promotion and training have a negative correlation with Company switching opportunity. It implies that promotion and training cannot be considered to be a strong factor affecting organization switching. Also, similar inference can be made for the factor Onsite opportunity. It is inversely depending on job allocation, working environment and satisfaction factor. Experts feel that no major hiring or job inductions are on the horizon and reskilling is the only way forward. Organizations need to put in effort to have an employee base that's more agile and responsive to changing client requirements. (Phadnis, 2019)

It is observed that majority of the companies are not willing to offer any benefits to employees, if they consent to continue in the organization after resignation.

It is clearly visible that, most of the companies are not conducting a formal Exit interview for employees who resign from the organization. This exit interview can have an important role in retaining the employees.

It was also found that 45.9 percent of the employees considered themselves to be underpaid and not as per the industry standard. This shows that a single factor, salary cannot be considered to be the only factor that influences attrition.

DISCUSSION

The challenge of retaining the best suitable talent can be met with the implementation of the findings of this study. The directed attention to the factors affecting attrition, in the order, can help reduce retention and increase employee loyalty. Proper recognition should be given for retention of the employees. Employee engagement programmes have to be incorporated in the working cycle. Managers and employees should be involved with their own career development building trust among each other. Recruitment and selection should be based on through guidelines and analysis. Exit interview has to be mandatory in every organization. Motivation and Mentorship are vibrant process to stimulate efforts to perform better. Gender discrimination has to be avoided and each employee has to be treated fairly with due respect. Lastly but not the least, Pro-active strategies need to be made by the government of Kerala and Maharashtra.

RESEARCH CONTRIBUTION

The study supports the results of the existing studies with respect to the variables such as Career Growth, Promotion, Remuneration, Rewards and Incentives, (Herzberg, Mausner, & Snyderman), (Goud, 2014), (Vijayasri, 2013) . However, the study identifies factors like lack of compensation and benefits, lack of career growth and absence of conducive working environment as important reasons for employee attrition in IT & ITeS industry for being a sustainable organization. The research contribution is in the form of strategic roadmap based on empirical data.

FUTURE SCOPE & IMPLICATION

The present study could be further extended to make a cross continental research, multi-dimensional analysis and Inter Continental and intra Continental research.

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RESEARCH

EFFECTIVE ETHICAL LEADERSHIP FRAMEWORK

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ABSTRACT

Ethical scandals in businesses have raised important questions about the ethical conduct of leadership. The world has seen major corporate scandals in the last decade which were a result of unethical practices. Increasingly, ethical leadership has received considerable attention in recent times. Various corporate scams and skeletons, around the globe, keep surfacing almost on a daily basis. Given this stormy business weather, the answers to all these issues in bringing tranquillity and equilibrium point towards developing and enhancing ethics in leadership. Ethics can be defined as the well-founded standards of right and wrong, that prescribes what a human ought to do, usually in terms of rights, obligations, benefits to society or specific virtues. Therefore, every leader has to be backed by ethics in order to emerge as an ethical leader.

Ethical leadership is leadership that is directed through respect for ethical beliefs and values and for the dignity and rights of others. Ethical leadership can be an essential component of a thriving, reputable, and ethical organization. Ethical leadership influences corporate culture and enhances an organization's reputation beyond the company. Ethical leaders make use of all those traits, skills, and abilities that are essential for the effective functioning of the organization as it contributes both to short term and long-term benefits for an organisation. In the long term, ethical leadership can prevent corporate fraud, moral conundrums, and difficult choices. It can also enhance corporate reputation and branding in the market place and establish market leadership. It also helps organizations gain more partnerships and customers who are also on the journey of ethical leadership, which can lead to more solid and sound business at the end of the day. When faced with a challenge, decision-making is a process that requires some level of insight and social action to decide from among a set of possibilities. A strong leader can use his position to encourage and enable others to act and think in approaches that advance strategic goals.

Humans are bound to make mistakes, but then how a leader restrains from committing an error while making a decision is the main theme of this paper.

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Ethical Leadership (EL) is an important concept to understand the development of ethics within an organization. Leaders make the difficult decisions — the "tough calls". This paper explores the various challenges faced by the leaders, also the challenges posed to the leader by the organization itself as well as the marketplace.

Additionally, this paper focuses on clarifying and explaining the circumstances that lead to errors or difficulties faced by leaders in decision making, in particular ethical decision making, in order to keep up with ethical values. The fundamental to developing ethical leaders is to increase personal, leadership, cultural and corporate values to a higher level of consciousness and to raise their awareness of how their behaviour impacts their own performance and that of the people around them. Developing leaders in an organization is a lifelong process.

Along with how a leader restrains himself and various stakeholders including his team, this paper further tries to explain the need and ways in which Ethical Leaders can be developed through training and education.

OBJECTIVE

1. To Understand The Concept Of Ethical Leadership-Ethical leadership (EL) is an essential component of successful and reputable organizations. Ethical leadership impacts corporate culture and positively affects an organization's external reputation. An ethically operating organization reaps many external benefits. Regardless of industry, the correlations between ethics, professionalism, and leadership in the workplace all yield similar findings. Because the benefits of having an ethical leader in command are numerous, it is significantly preferable. EL not only hold short term benefits like boosting employee morale and promoting positivity in the organisation but also has long terms benefits such as prevention of company scandals, ethical dilemmas and ethical issues. Therefore, the paper tries to understand the very concept of EL in an organisation.

2. To analyze how ethical leaders, withstand challenges and make error free decisions-All management and company operations are built on decision-making (DM), and excellent decision-making starts with each executive's deliberate and consistent strategic thinking process. High ideals, earnest efforts, intelligent leadership, and, of course, skilled implementation lead to good judgments, assessments, evaluations, and thus decisions. As a result, the idea of organizational performance and organizational goals are closely related. The paper will explore how ethical leaders withstand ethical dilemmas and how they attempt error free decisions under all conditions.

RESEARCH METHOLOGY

The present study has adopted the doctrinal method of research. It is also following the secondary research guidelines. The study has been divided into three parts based on the objectives sought to be achieved by the present study. The study has first tried to present the background of the key subject matter, that of Ethical Leadership, in brief through a literature review.

Secondly, the study presents the major concerns of the research, especially, the conditions under which the decision making of leaders gets challenged. Lastly, the study concludes with a critical analysis of both EL and DM and the author recommends steps for further research and consideration.

INTRODUCTION

Ethical scandals in business raise important questions about the role of leadership in ethical behaviour. The world has experienced large corporate scandals over the last decade due to unethical practices. Since then, EL has received a great deal of attention in recent years. In a highly competitive business environment, the top-level authorities of a company are often insensitive to people and the planet and usually end up pursuing only profit and success. To make a profit at any cost, they do not hesitate to break/bend the law, ignore rules and regulations, harm the environment, hurt stakeholders and even distort their image as a responsible corporate citizen. In this stormy business climate, the answer to all these questions to create calm and balance is the trend of EL. Managers need to be an important source of ethical guidance for their employees. It's time to make EL a central topic in leadership conversation and leadership development programs[1]. It is leadership that separates good companies from other companies and is an important element of effective leadership.

Every organization strives for optimal performance and should consider all improvement opportunities. While doing so, they can use EL as a tool to gain a competitive advantage. Leaders can influence employee behaviour and can be a very important tool. EL is leadership based on ethical beliefs and respect for values, and the dignity and rights of others. Therefore, it is related to trust, honesty, compassion, fairness, and impartiality. Ethics is also related to the types of values and morals that an individual or society considers desirable or appropriate. Another important aspect to ensure prosperity in business is consistency in performance. It is also a primary goal of any organisation, as it ensures growth.[2] Therefore, it is important they understand the concept of EL, and the factors effecting decision making of the leaders in an organisation[3].

UNDERSTANDING ETHICAL LEADERSHIP

Organizations those value employees, community and customers equally with their profits encourage positive corporate behaviour and it enhances their public reputation. Many organizations, as part of their social responsibility, consider helping the community in times of necessity and otherwise too. This exercise reflects the values of the organization and helps them build its reputation in public. Business ethics is about integrity, morality, credibility, fairness, integrity, and obedience to rules and laws; no matter what the industry the correlations between ethics, professionalism and leadership within the workplace all yield similar findings. EL is a vital component of successful and reputable organizations. It impacts corporate culture and positively affects an organization's external reputation. An ethically operating organization reaps many external benefits. There are various definitions put forward as to what is EL and the most used definition is the one given by Brown, "Ethical leadership is defined as the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making"[4]. Ethical leaders have the character of respecting and tolerating different views and values among employees. It also supports trust, honesty, compassion, virtue, and impartiality in conducting relationships with employees.

There are many advantages to having an ethical leader in command. While in the short run ethical leaders can help boost employee morale and help them feel excited about their management and their work, in the long term it can increase positivity, productivity, health, innovation and collaboration in your organization and make everyone feel happier to be at work. Additional long-term benefits of EL are that, it can prevent company scandals, dissolve ethical dilemmas and resolve ethical issues. It can even help organizations gain more partnerships and customers, which may cause extra money at the top of the day. Another long term benefit of EL is having a loyal and employee customer base. With strong values and strict adherence to business ethics leaders pave their path. High ideals, earnest efforts, intelligent leadership and, skilled execution and implementation of those always result in good judgments. As a result, the thought of organisational performance and organisational goals are closely related.[5] But is it that easy for leaders to stay ethical, what about the situations and challenges faced by them?

ETHICAL CHALLENGES FACED BY THE LEADERS IN DECISION MAKING

Success depends on how leaders choose to respond to the urgent challenges of today. In view of the level of uncertainty and dynamism that exists, this is a more complex requirement than ever before. Decision-making is the foundation of all management and business activities, and good decision-making begins with the intentional and consistent strategic thinking process of each executive. Good decisions are always the result of the best intentions, sincere efforts, intellectual leadership and skilful execution. What is certain is that all companies are trying to reach their set goals with the help of existing resources. Therefore, when defining an organization's performance, you can consider two aspects of the concept: your organization's goals and your organization's inputs or resources. However, EL must come first before organizational goals and inputs. This is because it is a factor that defines and determines the overall performance of your organization. Leadership is a very important function of management.[6] Leadership is a factor that motivates people to achieve their best performance. Any organization that consistently makes ethical business decisions are successful in the long term, but ethical decision makers do less well financially within the near term than their less ethical colleagues.[7] Making moral business decisions not only ensures a loyal client base but also establishes standards for the complete organization and helps firms build a robust and favorable reputation within the market. the moral decision-making process involves multiple stages that are fraught with complications and contextual pressures. Individuals might not have the cognitive sophistication to form the proper decision.[8] Therefore, leaders and also the remainder of us must follow must prioritize learning on: How and Why these mistakes occur. As mentioned earlier, making an ethical decision is a complex process, where the leaders are posed with a number of challenges. These challenges can be categorized under two heads (1) Organizational Challenges and (2) Moral Challenges; a few of them are enlisted below:

1. ORGANISATIONAL CHALLENGES INCLUDES:

1.1 Pressure To Take Care Of Numbers- Every company aspires to keep up a specific level of performance, but when it gets fixated on achieving quantitative goals, it puts aside morality and sound judgment so as to ensure the numbers. These objectives could be centered on one or the other performance metric; however, they're frequently pecuniary in nature. A charity organization's personnel are also compelled to sign on a selected number of contributors every week, for example, or a university may pressurise its academic staff to author a specific number of papers annually. Although essential indicators should be monitored by all firms, sound and good organisations include safeguards against fraud and manipulation. There is always good pressure on leaders to make sure, that they must maintain a certain level of performance and not just demonstrate ethics. Being an ethical leader is complex, but the leader must make sure that the organisation's primary goal isn't compromised.

1.2 Fear And Silence-Ethical issues may readily be concealed in a culture of fear and silence. As an example, important decision makers might not share identical concerns if others notice disparities or failures. Others could be reluctant to voice their concerns because they think they'd face promotion or termination. Others can feel powerless and believe there's nothing they will do to vary true.

1.3 A Weak Board-An organization's board is also weak if senior leaders are accountable for a variety of reasons, including inexperienced members, internal strife, conflicts of interest, or absenteeism from important votes or meetings. The Board of Directors determines, clarifies, and communicates the values and standards of the corporate and therefore the policies, procedures, and controls in situ function to include the moral values throughout the corporate, instead of impeding them.

A weak board often heralds an ethical collapse of a corporation just because it lacks the courage and cohesiveness to challenge unethical CEOs and senior management teams. This may often indicate that your organization is at an ethical risk. Often, failures of integrity result from the people within the top management who violate ethical boundaries and ignore or avoid the principles stipulated by law.

2. MORAL CHALLENGES INCLUDES :

2.1 Temptation Of Non-public Gain-Personal growth is extremely important to manoeuvre forward, but leaders must constantly develop an attitude to unlock the potential of the team. The challenge here is to resist the temptation of non-public interests at a collective cost.

2.2 Use Of Power-*Power corrupts and absolute power corrupts absolutely.* Leaders have power and authority, and it is crucial for them to use it efficiently to encourage team engagement and team growth. At times leaders are willing to misuse their power and authority, and it becomes challenging to not misuse that for benefit of any sort.

2.3 Managing Justice-Every leader has a prejudice against something or someone. Therefore, it is necessary that fair play and justice should prevail. Leaders should always be fair and not let prejudice cloud their judgment whilst handling teams. Some of the biases of leaders are even found to be conscious and not just unconscious.

2.4 Pursuing An Ethical Mandate-Every leader is posed with a challenge, to make a choice for the good of the organisation but it shouldn't comprise his own individual moral mandate.

2.5 Addressing Failure-At times for various reasons the leaders only focus on success at any cost, thereby adopting first time right approach. This limits a leader's ability to embrace and tackle failure. This is extremely unfortunate because successful leaders are the ones who have tasted failures during their initial years as professionals.

2.6 Doing Good-Leaders might want to do good for the organization and individuals every time. While it is appreciated but realistically it is not possible to do good at all times. As leaders have various responsibilities it is important for them to use their judgment and weigh them to do good.

HOW ETHICAL LEADERS WITH STAND THE CHALLENGES?

Strong ethical character: an ethical leader has a strong sense of morality and will usually be brave[9].

Passion to do "right": This enthusiasm, drive and inspiration serves as the foundation for all ethical ideas. Like many other personality traits or dispositional traits, it's not often obvious why someone wants to do the right thing. Some people may have this awareness from birth, while others gradually acquire it through spiritual, intellectual, or sensory sources. Regardless of where it originates from, it is hard to see a moral leader operating without it. It becomes the foundational characteristic that inspires and supports the other traits and behaviours.

The fundamental goals or arguments for morality have probably been absorbed by leaders who have a moral sense or the will to act morally. These leaders view morality as serving at least the following goals[10], whether they are idealistic or practical.

Ethical leaders are morally positive, sensitive, perceptual, aware and ready to tackle ethical issues and provide EL. Ethical Leaders use moral imagination to try to imagine or predict situations in which people may be injured and take timely actions. Moral leaders do not wait for ethical issues to arise or for decisions that do not consider moral aspects. Ethical leaders are always anticipating and acting[11]. One-way moral leaders can actively shift is to shift the background and foreground

As an ethical leader, one may prevent many frequent disagreements by employing effective communication methods and learning about and putting tried-and-true conflict resolution procedures to use. Especially in difficult decision making situations, establishing safeguards to evaluate and compare standards of behaviour and decision-making will give another wonderful way to create an ethical culture among all stakeholders of an organisation. Common standards and fundamental values should be upheld consistently. These guidelines and protections will go a long way toward encouraging moral conduct and reducing the likelihood of ethical breaches.

ROLE OF ETHICS IN LEADERSHIP DEVELOPMENT

The ethical factor has assumed unprecedented urgency given the increasing influence of global corporations not only on economic life but also on such domains as culture, politics and the environment.[12] The easiest part of the leader's task in ensuring good behaviour on the part of employees, managers, and executives is to ensure that everyone follows the law and the rules. Ethical conundrums are particularly challenging in those murky areas of a leader's responsibilities. The repercussions of breaking the law are obvious and widely known. Making the appropriate choice, however, when presented with complicated challenges that could have an influence on numerous stakeholders and society as a whole. Ethics helps leaders to make sure their decision is best in the interest of the organisation as well as their own moral code of conduct[13]. Therefore, maintaining ethical practices within an organization is at least a much-needed precaution for a long-term organization failure[14]. Following this line of reasoning, many organizations have inferred that ethics not only prevent failure but also help to avoid legal battles, and increase public trust and ethical practices, thus providing the competitive edge necessary for long-term success. This is possible if a leader implements the code of ethics and ethical business practices in decision making by[15]

Maintaining a high level of professional responsibility

Avoid situations of conflict of interest and destroy personal interests for the common good of the organization and society.

Always act and work with integrity in any situation you find yourself in.

Never discriminate against people for any reason

Maintain professional relationships based on mutual respect between individuals and organizations.

Stay committed to your personal work ethic for whatever reason.

Be honest and objective in all your dealings with third parties

Establish a fair system in the organisation with special perks such as rewards

Organizations to maintain corporate transparency even if it is not mandated

Ensuring the code against any form of harassment is in place and the same is communicated to all the employees of the organisation

Code of Conduct to be enforced for the outsourced companies

A dedicated hotline, accessible for all employees for reporting any misconduct in an organisation

To organisation must contribute towards social developmental activities

To make sure, the customers are well aware about the company's product and services

EFFECTIVE ETHICAL LEADERSHIP FRAMEWORK: A PROPOSITION BASED ON THIS PAPER.

CONCLUSION

Organizations today must constantly adjust their organisational structures to the highly competitive and dynamic environments in which they operate[16]. Capabilities are *core or foundational* to leadership even today and will assume greater significance in the future on account of their impact on emerging capabilities. The new paradigm for leadership is the real deal. Every leader today requires the following capabilities to build up an ethical organisation[17].

BUILDING AND NURTURING NETWORKS:

Every leader has to have the capacity to collaborate with a variety of traditional and non-traditional partners and stakeholders in a network that is constantly evolving

ORIENTATION TOWARD INSTITUTION BUILDING:

Every leader must have the capacity to prioritise an organization's mission and goals over all other considerations, including one's own accomplishments

DISRUPTIVE ENVISIONING:

A leader must have mental fortitude and perspective to cut through the noise of today in order to challenge paradigms and plan for multiple futures for tomorrow's organisation.

MANAGING MULTIDIMENSIONAL DIVERSITY:

A Leader should have the capability to lead a workforce that span generations, cultures, employment models (part-time with multiple contracts, full-time) and compositions (machines AI etc)

A corporation is more likely to foster high standards for honesty, integrity, and justice when it successfully communicates its culture, values, and beliefs. These ideas must permit direct and unfiltered criticism from your team, your division, and even your own bosses. Colleagues can feel at ease expressing the positive and the negative when leaders foster that degree of trust and unity. Ethical leaders should actively promote openness, and considered disagreement, and a range of viewpoints from across the organisation.

The ethical practices of an organisation and its employees must be monitored carefully as they have gained significant public attention. Leadership style represents organisations values and explains the goals. The discovery of multiple immoral actions and controversies exposes the self-centered, egoistic pattern of business leadership, notwithstanding the penchant for public display. It is obvious that in order to overcome this situation, leaders in modern businesses must serve as role models for ethical corporate leadership throughout society.

Having the finest human resource is a fundamental component of any organisation. As mentioned earlier EL is about having compassion, respect for others' values and ideas, and tolerance to accept failure. These combined and embedded within the corporate culture helps an organisation to cultivate the finest human resource.

This paper reflects an important aspect of EL which is knowing one's place in the vast network of stakeholders and constituencies and putting the organization's success before one's own ego. Moral leaders place more focus on some greater good than themselves. EL recognizes and utilizes the lever that improves employee satisfaction and loyalty. Leadership and Ethics must go hand in hand. While some people have a tendency to believe that one must choose between being prosperous and successful and acting morally, this is simply untrue. Success depends on moral people and moral leaders. As it is rightly said

> The function of leadership is to produce
> more leaders and not more followers
> ~Ralph Nader

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RESEARCH

PREFERENCE AND ATTITUDE OF CONSUMERS TOWARDS ONLINE FOOD PRODUCTS: A PHENOMENOLOGICAL STUDY

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ABSTRACT

This study was conducted to examine: how the internet affected consumer food purchase behaviour and the consumer indifference; and customer concerns regarding information on food security for online foods. The study was conducted in Srinagar the capital of Kashmir, the time period of data collection was October to February 2020. The selection was randomly conducted on two hundred sixteen (216) clients online via Google forms and collected through email and whatsapp. Most interviewees claimed they were looking for nutritious products via the internet (68.3 percent). About a third of the people surveyed select products based on accurate food safety or food facts. The majority of respondents (51.6%) concerned the date of expiry and most of the information on brand names (9.8%) and food licenses (11.3%) was ignored. People with a serious internet connection and difficulty with normal duties were more likely to seek for online food products. These results give customers meaningful recommendations in the online purchasing of chosen food items.

Keywords: *behaviour; consumer; food items; indifference; online purchasing*

INTRODUCTION

The new innovation of the Internet has enabled people to explore, compare prices and conveniently access these services, therefore accelerating the expansion of online food services. At least 35% of the Kashmiri population was looking for specifics on online food services once (Local Consumer Review Survey, 2020). Around one-third, notably in the developing nations, of Asia-Pacific participants stated they were looking for and ordering things over the internet (Neilson Company, 2018). However, such activity raises issues over food safety and cleanliness, in particular in low- and middle-income nations with heterogeneously fragmented food systems, with tiny, informal shops

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predominantly (D. Grace, 2015). In particular, unchecked food processing, packing and transfer among tiny on-line food dealers can increase the danger of food contamination and contribute to the growth of various pathogenic bacteria in the food poisoning outbreaks (H I Hsiao et al. 2016).In order to particularly regulate food supplied over the Internet, the Food Standards Agency of the United Kingdom has published guidelines which offer special suggestions to customers, online foods selling firms and local authorities. In addition, online food safety operations by food sellers are examined due to reports of outbreaks caused by the microbiological risk of food sellers in China.

India is considered to be one of the fastest growing in the rise of penetration of the Internet in Asia and the e-commerce business has indisputable rise. There is a steady growth in the number of Indian customers buying items over the Internet or social networking platforms, with a gain of 25% in 2018 and 13.2% at the end of the year. In India, the purchasing of food through social media is a fast-growing trend in which consumers may acquire homemade foods given by internet users who process, market and sell products. This increased trend was driven by the exponential rise in India by Face-book and other users of social media.

However, this type of food commerce has several downsides. The conventional technique enables customers to assess subjectively the consistency of foodstuffs and the cleanliness standards (Gabriela Milhassi et al. 2014). Most food label info is auto-advertised on the Internet in the meanwhile. This prevents the accuracy of the data on tracking of food, food handling and merchant licenses from being checked (WHO, 2015).Furthermore, the new food safety chain management appears to be problematic (World Bank, 2016), and the Indian food administration still lacks laws and e-commerce rules for regulating food services via online systems, particularly when it comes to recent fashionable trade techniques such as social media (Thang T C et. al 2015). The problem is thus to ensure food safety in online food shopping, which in prior studies is not as well understood. Customer understanding of the online food trade is vital to the management and advice of future decisions when regulations have just recently been applied.Limiting the dangers of food items purchased from an online trading site is mostly based on the online purchasing behaviour of clients. Existing study revealed that one of the most important elements influencing food service choices was peer reviews or recommendations (WHO Expert Consultation, 2004). Nonetheless, the influence of online human interaction on Internet-based food service searches has not been investigated. As a result, the current study attempted to determine the frequency with which people will use the Internet to purchase food goods and to categorize the elements related with this behavior. Our research has provided a more in-depth understanding of how customers think about food safety while purchasing online food goods.

MATERIALS AND METHODS

Study Setting, Sample Size, and Sampling Method

The study was conducted in Srinagar city, the capital of Kashmir and hub of food services. The data was collected from October to February 2020 via Google form (Questionnaire) survey through social media (email, watsapp, and facebook). A total of 230 persons from different locations of the Srinagar city were randomly picked in this sample. We randomly selected food establishments from a list of registered food facilities with municipal authorities of Srinagar city. Participants from each facility were picked at random. All participants received information sheets through Google forms and they were clearly described as the goal of the investigation. Participants must satisfy: (1) aged 14 or older; (2) permission to participate; and (3) answer questions. The following inclusion criteria have been met. A total of 216 participants have agreed to participate in the poll with a 93.91 percent response rate. The reliability and acceptability of the questionnaire were assessed in a pilot survey among 25 consumers of diverse genders and ages. Small modifications were thus made to the official questionnaire to make it reliable.

MEASURES AND INSTRUMENTS

The online questionnaire (Google forms) was sent to respondents in Srinagar through social media (email, watsapp and face book). The variables incorporated in the questionnaire are as follows:

SOCIOECONOMIC CHARACTERISTICS

The socio-economic data were collected on age, ethnicity, educational achievement, marital status, employment and monthly income.

Online Shopping Behavior of Customers

In this report, the notion of using online food services is defined when customers use Internet technology to find and buy their favourite food products. In addition to the types of websites used to order foodstuffs, participants were also asked about their online experiences. The main determinants of customers' tastes, the level of confidence perceived on the food health record and the information on ready-to-eat food packaging that were of interest were discussed in order to buy online food goods.

Influences of the Online Interpersonal

The study also found motives for finding food services through the internet. Using a 5-point Likert scale, respondents were interviewed on online interpersonal impacts (e.g., the measure included five answers: always/great influence; usually/moderate influence; occasionally/some influence; seldom/never little impact): always/great impact. The following are the questions:

How much are your personal behaviour and lifestyle influenced by pictures and information that are shared by your friends on the Internet?

How frequently are you visiting places that your friends loved, suggested and shared on the Internet?

How frequently are you involved in activities that your friends appreciated, suggested and shared on the web?

Other Characteristics

In this investigation, health problems were examined in five stages: no difficulties; little issues, moderate difficulties; significant difficulties; and serious difficulties. Because of this, there are five different levels of pain / discomfort. The index of body mass was assessed by the height (cm) and weight of the participants (kg). We are using an updated BMI categorisation for Asian populations, which the World Health Organization (WHO) has revised with the following intermediate cuts: underweight (18.5 kg/m2), average weight (18.5-22.9 kg/m2), obese (Above 25kg/m2).

Statistical Analysis

The data was analysed with STATA version 14. The independent tests for t and ^{2} examined the differences in features of those who searched for food on the internet and those who did not search. Multivariate binomial logistical regression was used to categorise the parameters related with food product choice on the internet. A step-by-step filter strategy, which set the p-value of the log chance ratio test to less than 0.1, was used to eliminate non-significant variables. For statistical significance, a p-value of 0.05 was employed.

Ethics Approval

The study focusing on health issues was approved by the Chief Medical Officer Health Department Srinagar. Both participants completed an informed written permission statement after careful explanations. Participants would at any point be allowed to leave the interview and would not suffer from the usage of foodstuffs. All subject information was kept confidential and anonymous information was utilised for research purposes.

RESULTS

Table 1 illustrates the participants' ethnic and social characteristics and their behaviour in the online search for food services. A total of 216 participants accessed the Internet, of which 51.9% were women, and the proportion of women who were seeking online food was somewhat higher than men (48.1 percent). Most people were high school students or older. Altogether 58.4% had a job and 21.2% were students. The average gross monthly income was INR 25,000.

Table 2 shows the customer's expectations and conduct on the content of online foods. Most of the participants (93.1 percent) were using the internet, with social media being the most prevalent online medium among 216 Internet users.

The most important influence on the behaviour of customers was convenience (38.9%), followed by price (33.4%), in online food shopping (33.4%). About 18.9% of respondents select food products on the basis of their self-esteem for hygiene and food quality.. However, the online food safety data have been relying on barely one-quarter of the participants. The most significant criteria were the components for ready-to-eat meals (46%).Participants were most concerned about the expiry date (52.8%) and the product label brand (22.2%). Around 5.6% were interested in the names of the manufacturing facilities and food licensing data.

Table 1: Socio Economic Characteristics of Participants

Characteristics	Internet use for seeking food products				Total		p-value
	Using		Not Using				
	n	%	n	%	n	%	
Gender							
Male	84	80.7	20	19.2	104	48.1	0.001*
Female	96	83.4	16	14.2	112	51.9	
Marital Status							
Single	88	91.6	8	8.4	96	44.4	0.042*
Married	114	96.7	4	3.3	118	54.6	
Divorced	2	100.0	0	0.0	2	1.0	
Education							
10th	10	66.6	5	33.3	15	6.9	0.056*
12th	15	53.5	13	46.5	28	12.9	
College & Above	168	97.1	105	2.9	173	80.2	
Employment							
Worker (daily labor)	12	66.6	6	33.3	18	8.3	0.034*
Student	42	91.3	4	8.7	46	21.2	
Jobs	121	96.1	5	3.9	126	58.3	
Other	24	92.3	2	7.7	26	12.2	
Age							
15-20	7	87.5	1	12.5	8	3.7	0.026*
20-35	73	96.0	3	4.0	76	35.2	
35-45	100	97.1	3	2.9	103	47.6	
45-60	21	80.7	5	19.3	26	12.0	
Above 60	2	66.6	1	33.3	3	1.5	
Monthly	Mean	SD	Mean	SD	Mean	SD	
Income (000, INR)	16.2	4.8	15.4	5.1	16.8	4.4	0.002**

Number of total participants, n = 216.

Statistical significance level $p < 0.05$

* Chi-square test, ** Mann Whitney test.

Table 2: Attitudes and behaviors towards food information Provided online among participants

Attitude and Behaviour work	n	%
Using Internet (232)		
Using Internet seeking food products	216	93.1
Preferred platform		
Website	74	34.2
Social media	118	54.6
Others	24	11.2
Factors influencing costumer behaviour		
Convenience	84	38.9
Price	72	33.4
Hygiene	41	18.9
Certified	19	8.8
Level of trustworthiness		
Unbelievable	21	9.7
Neutral	87	40.3
Believable	108	50.0
Important criteria		
Products name	34	15.7
Advertisement	78	36.1
Ingredient	36	16.7
Price	68	31.5
Label ofready to eat food		
Product name	48	22.2
Business license	12	5.6
Manufacturing date	42	19.4
Expiry	114	52.8

Source: Online Survey, 2020, Baramulla

Table 3: Association between online interpersonal influences and seeking food products on the Internet

Influencing Attribute	Using the internet in seeking food products		not using internet for seeking food products		Total		p-value
	n	%	n	%	n	%	
Self perception of influences of online purchase behaviour and life style							
No	73	97.3	2	2.7	75	34.7	
Some	81	91.0	8	9.0	89	41.2	0.028*
High	48	92.3	4	7.7	52	24.1	
Visiting entertainment establishments recommended by friends							
Rare	112	92.6	9	7.4	121	56.0	
Frequently	72	93.5	5	6.5	77	35.6	0.001*
Always	12	66.7	6	33.3	18	8.3	

Source: Online Survey, 2019, Srinagar

Table 3 examines how often food goods are searched on the Internet by several sorts of interpersonal behavioural, lifestyle and social effects. Online relationships have been more likely to acquire food on the internet for the most influential persons in behaviour and lifestyle (89%, p <0.01). In addition, clients who frequented entertainment businesses regularly were more likely to search for online food goods (93.5% p < 0.001).

Table 4: Differences in health problems and BMI index between participants using and not using the Internet to seek food products.

Characteristics	Internet use for seeking food products: Using		Not Using		Total		p-value
	n	%	n	%	n	%	
BMI							
Underweight	10	71.4	4	28.6	14	6.5	0.012*
Normal	119	94.4	7	5.6	126	58.3	
Overweight	52	92.9	4	7.1	56	25.9	
Obesity	18	90.0	2	10.0	20	9.3	
Pain/Discomfort							
No problem	175	97.2	5	2.8	180	83.3	
Having problems	32	88.9	4	11.1	36	16.7	0.001*
Anxiety/Depression							
No problem	148	94.9	8	5.1	156	72.2	
Having problems	53	88.3	7	11.7	60	27.8	0.042*
Difficulty in usual activities							
No problem	132	89.2	16	10.8	148	68.5	
Having problems	61	89.7	7	10.3	68	31.5	0.032*

Source: Online Survey, 2019, Srinagar

Number of total participants, n = 216, Statistical significance level p < 0.05 by * Chi–square test.

Table 4 contrasts the onset of health issues and the BMI index among individuals buying food goods and not buying them over the internet. A pain/discommodity (p<0.001), anxiety/depression (p<0.042), mobility difficulties (p=0.001) and challenges with daily routine operations (p<0.032) were more likely to utilise the Internet to find food goods than their peers.

Table 5: Factors associated with consumer's preferences regarding purchasing online food products

Characteristics	Using internet use for seeking food products	
	95% CI	OR
Gender		
Male	Ref.	-
Female	1.25**	0.92:1.56
Marital Status		
Single	Ref.	-
Married	1.56***	1.42:2.08
Education		
10^{th}	Ref.	-
12^{th}	1.84*	1.92:3.01
Self perception of influences of online purchase behaviour and life style		
No	Ref.	-
Some/High	2.1**	0.86:1.29
Visiting entertainments recommended by friends		
Rare	Ref.	-
Frequently	2.41*	0.56:0.92
Pain/Discomfort		
No problem	Ref.	-
Having problems	1.21**	1.36:2.58
Anxiety/Depression		
No problem	Ref.	-
Having problems	1.04***	0.76:1.32
Difficulty in usual activities		
No problem	Ref.	-
Having problems	1.12**	0.92:1.72

Source: Online Survey, 2019, Srinagar

* Indicate significance level *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ by multivariate binominal logistic regression. OR: OddsRatio; 95% CI: 95% Confidence Interval. Ref: reference group.

DISCUSSION

This is one of Kashmir's first such research to study food and consumer behaviour versus purchases through the internet, to the best of our knowledge. Most participants indicated a positive view of utilising the internet to find foodstuffs. But the health quality of foodstuffs they sought over the Internet was mainly worrying for a tiny number of customers. Only $1/5^{th}$ of the participants trusted internet food safety and hygiene. Moreover, women who have suffered from pain and suffering and who have had problems performing their ordinary work have a strong relationship in utilising the internet to look for food services and are greatly impacted by their online friends. The internet plays a major part in locating different types of service information in today's high-speed world (Seleski L et al.,2012) and helping customers reduce information costs and time. Moreover, our data show that social networks online were one of the most popular spots to search for meals. In line with earlier studies, a large number of food consumers have been visiting food business at social networking sites (Freeman B et.al, 2014). The result is due to the rapid rise in social media users (Face book Newsroom Stats., 2017), as well as the method in which social media helps people expand their network of contacts (Cunningham H, 2011).Our research found the largest percentage of consumers who picked food goods based on price and comfort, while those who picked food goods based on certification for food hygiene and safety were the lowest. This is a preceding conclusion, as the main concerns for Kashmir's online purchasing community are sustainable cost and comfort. In Kashmir, buyers think that food cleanliness is a crucial concern in order to restrict the number of resources they need to examine, but price and convenience are two of the major elements affecting their behaviour while purchasing food goods on the Internet (Khanh N T V et.al, 2014).A substantial share of the customers utilise calories and diet labelling while purchasing foods according to research conducted by Nguyen (Nguyen L H et.al, 2018). According to the research, because of the likelihood of finding possibly misleading and disappointing information, the number of individuals who distrusted internet diets has increased. Consumers fear that their food goods can be easily sold and the bulk of these online sites do not pass the standard testing method (Aynoride O, 1998).Consumers may subjectively assess food safety on the basis of food processing and cosmetic attractiveness in typical food venues. On the other hand, customers with online food suppliers can only identify which are hard to verify based on the promotional clip and comments of other users owing to the simulation of the service. With regard to ready-to-eat food, participants were worried mostly on the expiry date of foodstuff, while the knowledge regarding installations or the licenses for foodstuffs was generally ignored (Nyenje ME et.al, 2012).In addition, customers generally depended on their own judgement of food cleanliness rather than precise confirmation of food safety qualifications or food sources. Their mistake might be caused by a lack of information about food safety on labels, particularly internet transactions (Buzby J C, 1996). We assume that customers may only rely on the self-advertising facts, the subjective evaluation or more evidently the expiry time, to validate the circumstances on food security of these commodities. As a consequence, people are misled by the realities of Internet advertising that cannot be monitored by relevant authorities, leading to issues over food safety and foodborne illness. Our present study also indicated that encounters with the internet market, particularly with colleagues, had a major influence on participants' willingness to purchase online food. These are forecast findings which can be explained by the great interactivity of the Internet. When peers upload, publish images or criticism on food products in social media, people who are readily influenced by others believe the choices and impressions of their fellow students (Tran B X et.al, 2017). The reliability and inspection of the data source by the competent authorities would be helpful. On the other hand, if peer judgments were unfair and confused, it would be unhelpful (Zubiaga A et.al,2016).This kind of engagement is therefore impulsive as well as harmful to the safety of food. Consequently, it is essential to examine online information on food labels from credible sources to ensure the safety of foods. Furthermore, this research has led women to purchase foodstuffs via the Internet, which may be justified in Indian societies by gender standards. As a result, many women resort to the Internet to discover cuisine that saves them time (Skoloda K M, 2009). People with pain or anguish and trouble in doing typical chores choose to utilise the web to acquire nutritional products. Since they cannot engage in essential everyday duties like homework, buying for food or preparation of meals, they cannot operate on their own and have to rely on help from others (Gilmour H et.al, 2006). They therefore consider the Internet a vital platform for their operations, such gaining information on the food service and ordering foods (Leung L et.al, 2005).

IMPLICATIONS OF THE STUDY

The value of online consumer information on food products, rather than simply concentrating on arbitrary judgments, is underlined in our research. Customers must acknowledge the origin and manufacturing of the food and the necessary certification, granted by the appropriate authorities, before purchasing food products online. Furthermore, in order to increase client confidence, food vendors should proactively provide genuine, suitable web information concerning their foods. The Government should order online food dealers to register their firm and give information on food safety to help buyers receive extensive information on online food goods.Both of the data will be entered into a government-run computer structure. It has previously demonstrated that this strategy in China is a successful technique. If a customer is concerned about food quality standards, they will pick food suppliers online and track infringements using this framework. Our findings also imply that policymakers should focus on the internet audience because of our substantial involvement with online users. Future action has to be implemented through internet campaigns to highlight concerns about quality and safety of food. Our research reveals that programmes should address women who are mostly responsible for preparing family foods and women with difficulties in the management of everyday tasks in order to provide enough safety information for the online food services.

STRENGTHS AND LIMITATIONS

Collecting data from the Srinagar city that is hub and a representative of the Kashmiri society where people from different areas of Kashmir dwell. This representative sample data represent whole Kashmir by inductive methodology. Second it is one of the first researches conducted on online food purchase behaviour in Kashmir because of the conflict and disturbances the internet is frequently shutoff no researcher bother to conduct the research. However, some limitations have to be taken into account. The results are based, to begin with, on self-reports, which might lead to taste differences. Second, the causal association between frequent internet use and the level of interpersonal online communication impact cannot be explored due to the scope of the cross-sectional investigation. We cannot undertake more adequate studies due to a shortage of money because it is not a funded research. In addition, the literature on the subject is quite little as no such premia facie research on Kashmir exists. This would help us to base our findings on future study. Finally, this research does not cover additional elements, such as the impact of conflict on food purchase through the use of internet services. The relationship between online meal ordering and foodborne disease has also not been discussed in this paper. These objectivesshould be examined by future studies.

CONCLUSIONS

The research reveals that the internet has been a common occurrence in Srinagar for individuals to access food services information, and those interpersonal purchases online had a major influence. When it comes to the online selection of nutritious foods, many buyers were not worried about precise food safety statistics. Our results provide us reasonable advice for consumers to buy food online from the food merchants who sell on the internet and abide the food safety laws.

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RESEARCH

CONSUMER ATTITUDE TOWARDS GREEN HOTELS

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ABSTRACT

Consumer attitude combines cognitive information, beliefs, emotions, and behavioural intentions regarding a particular consumer product or service. Consumers' attitudes help marketers better understand how they perceive and what values and beliefs they hold towards an object. A few selected hoteliers no longer hold the hotel market; with an increasing footfall of consumers and consumers becoming extra demanding, marketers are becoming increasingly aware of consumer perceptions and attitudes. Hoteliers are adopting several promotional methods, and green marketing is one tool to attract environmentally conscious consumers. In this framework, an effort has been made in this study to investigate consumer attitudes towards green hotels in India. Green hotels are those hotels that have made essential adaptations and modifications in order to minimize their impact on the environment. Hotels that are adopting green marketing practices can be classified as green hotels. Consumers have different attitudes regarding different attributes of green hotels, and the overall attitude affects their decision toward green hotels. There are different types of models on consumer attitude that have several factors that influence consumer attitude. In this research, efforts have been made to understand better overall consumer attitudes towards green hotels with the help of Fishbein's multi-attribute model. The study is grounded on primary data collected through a structured questionnaire using convenience sampling with a sample size of 100 respondents. There are three sections in this paper. The first section is the respondents' demographic profile, the following section covers the relative importance of different attributes concerned with green hotels described through descriptive statistics, and the last section covers the relationship of green hotel attributes with different variables. The results are expected to provide an overall understanding of consumer attitudes towards green hotels.

Keywords: *Hotel industry, Green marketing, Green hotels, Consumer demand, Consumer attitude*

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INTRODUCTION

Green marketing is a set of marketing practices concerned about environmental safety. Green marketing refers to designing, promoting, pricing and allocating products and services so that they will not harm the environment and meet the customer's expectations. The main emphasis of green marketing is to market products or services which are environmentally safe. In general, green marketing aims to minimize the environmental hazards caused by industrial manufacturing or service providers and to strengthen the corporate eco-centric image in the consumer's perception.

Green hotels are those hotels that have made essential adaptations and modifications in order to minimize their impact on the environment. Hotels that are adopting green marketing practices can be classified as green hotels. They are environmental- friendly hotels and are instituting programs that save energy and water and reduce solid waste while efficiently protecting the environment.

Attitudes manifest a person's inner sentiments that reflect his or her favourable or unfavourable disposition toward a sure thing. Because attitudes result from psychological processes, they cannot be directly seen. They must be inferred from what individuals say and do. Simply put, attitude is how we think, feel, and behave toward a product, service, television commercial, or business. Attitude in consumer behaviour "is a learned predisposition to behave in a consistently favourable or unfavourable way concerning a given object" (Attitudes and consumer behavior, July 2000). Concerning a specific subject, Louis Thurstone defines attitude as the total of a person's inclinations, sentiments of prejudice or bias, preconceived beliefs, ideas, fears, threats, and convictions. Attitude is the individual's predisposition to evaluate some symbol and aspect of work favourably and unfavourably(Daniel, 1960).

THE MULTI-ATTRIBUTE ATTITUDE MODEL

It reveals how consumers feel about an object, like a product, service, cause, or idea, based on how they see and judge the most important items about the object or what they think about it. There are many different versions of this attitude model. However, the three main ones are 1) The attitude towards object model, 2) How you feel about behaviour 3)The model of the theory of reasoned action. In this study, the attitude-towards-object model is used because it is beneficial for determining how people feel about a product, service, or brand. (Fishbein, 1963). According to this concept, the consumer's attitude toward a product/service or brand results from the presence/absence and appraisal of unique product-specific beliefs and features. Thus, customers develop favourable sentiments toward brands that they perceive to possess an appropriate number of good features. They have unfavourable views toward brands that, in their view, lack an acceptable amount of desired traits or have an excessive number of undesirable or harmful features.

CONSUMER ATTITUDE AND GREEN HOTELS

Many past studies show that consumers behave positively when they pay for environmentally friendly hotels. According to (Choi, 2009) cultural differences and the social structure determine consumers' green behavior and willingness to pay. Similarly, it was found that the more consumer is conscious of the environment, the more they are willing to pay for the green initiatives that hotels offer. Consumers with different demographics pay more for mid-priced luxury hotels (KH Kang, 2012).

Lee et al. analyzed the relationship between customer behavioral intention and attitude. The study shows that expected outcomes directly affect behavior intentions, which in turn becomes the reason for choosing a green hotel over a non-conventional hotel. Additionally, healthy guestrooms, an eco-friendly environment and less expense were positively associated with visit intentions and word-of-mouth intentions (M Lee, 2011). Another study shows that customers' attitude towards green hotels is associated with their intentions to visit a green hotel, spread word–of–mouth about it, and pay more for the hotel. There were gender differences in such intentions, and these intentions were affected by previous experiences. However, such intentions did not significantly differ across age, education, and household income (Han & al, 2011). Belief (behavior's component) about environmentally friendly practices within the hotels has been discussed by Cometa. The study concluded that consumers with favourable beliefs about the attributes were more likely to value green hotels and vice-versa. (Cometa, 2012).

Customers possess a positive attitude and positive environmental behavior while responding to a green hotel. However, based on the given characteristics and focus on luxurious services, it was found that there is a very low positive correlation between environmental ethics and green hotel consumption behavior (CW Tsai, 2008). It implies that consumers have conflict in their beliefs, feeling and behavior to enjoy luxury responsibly. Consumer behavior can be affected when attitude's three components, namely belief (cognitive), feelings (affective) and reaction (behavior), have perfect compatibility. This finding is supported by (L Miao, 2012). According to him, the consumers have inconsistency in two settings (household and hotels) where hotels have significantly less pro-environmental behavior than household settings. This study further revealed that normative motives dominate pro-environmental behavior in a household setting, and hedonic motives are the strongest hotel predictor. It shows the relationship between consumers' attitudes, behavior and hotel green practices. Knowledge of action strategies and issues, attitudes, locus of control, verbal commitment and sense of responsibility were associated with responsible environmental behavior (JM Hines, 1987). This discussion has shown that consumer attitude and components of consumer attitude towards green hotels are related to the intentions and behavior in their consumption habits. Studies have shown different models to show the relationship between the attitude and behavior of consumers towards green hotels. The most potent environmental effect came from personal- philosophical values and emotions, not actual knowledge (Grob, 1995). The environmental attitude was a predictor of ecological behavior (Kaiser, 1999). This study used Ajzen's planned behavior theory to conform three measures as orthogonal dimensions by analyzing these factors (environmental attitude, environmental values and ecological behavior intention). Pro-environmental skill as a factor that came from correlations between environmental motives, beliefs and perception is significantly correlated with environmental behavior (Corral, 2002). The studies show a broader connection between hotel consumers' decision-making process by testing the relationship between attitude towards green behavior, visit intention, overall image, willingness to pay and word of mouth intentions in green hotels.

The results show that overall image is a positive function of attitude towards green behaviour, and overall image effects (visit intentions, word of mouth intention and willingness to pay more) significantly. A structural modelling comparison revealed that overall image completely mediates the attitude effect towards green behavior on components of behavioral intentions. The attitude-towards-object model is used in this study because it is especially suitable for measuring attitudes towards a product/ service or specific brand (Fishbein, 1963). With the help of this model, an evaluation of the overall consumer attitude towards green hotels and its impact on the overall image (revisit intention, word of mouth and willingness to pay) has been made.

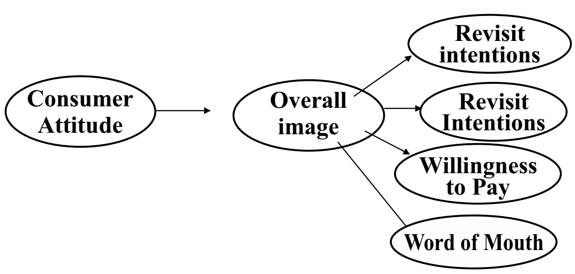

Fig1. The conceptual model (Han & al, 2011)

RESEARCH GAP AND PROBLEM STATEMENT

Several researcher in the past studies attempts to analyze the attitude of consumers towards green hotels with the help of different models of attitude. However, little has been researched on how attitude affects the overall image. Since the overall image of the hotels from the point of view of consumers is an essential requisite in planning proper strategies, marketers must know the components that build the overall image. This study is an extension of past research wherein an attempt has been made to establish the relationship between attitude and overall image.

OBJECTIVES

To study the perception of consumers' beliefs regarding attributes of green hotels.

To study the weights, consumers attach to each attribute associated with green hotels.

To study the nature of the association between beliefs about the attributes of green hotels and the overall image of green hotels.

To study the nature of the association between weights of the attributes of green hotels and the overall image of green hotels.

HYPOTHESIS

H01: There is no positive correlation between consumer beliefs about the attributes of green hotels and the overall image of green hotels.

Ha1: There is a positive correlation between consumer beliefs about the attributes of green hotels and the overall image of the green hotels.

H02: There is no positive correlation between the weights consumers attach to the attributes of the green hotel and the overall image of the green hotels.

Ha2: There is a positive correlation between the weights consumers attach to the attributes of the green hotels and the overall image of the green hotels.

RESEARCH METHODOLOGY

Source of data - Primary data.

Sample size-100

Sampling Method- Convenience sampling.

Tool – Structured questionnaire.

Procedure - For the collection of data, an online survey was carried out with a sample of 100 respondents. The convenience sampling method was used where the consumers who are aware of green hotels and have visited green hotels were selected as respondents. The data was collected from various places in and around the Delhi-NCR region. A structured questionnaire was used for the data collection. The respondents were requested to fill the questionnaire on aspects like the beliefs that they hold on attributes of green hotels and the weights (importance) they give to different attributes of green hotels. The consumer's beliefs about attributes of green hotels and the weights they give to different attributes of green hotels are measured in a five-point Likert scale starting from strongly agree to disagree strongly, where strongly agree = 5, agree=4, neither agree nor disagree =3, disagree=2, strongly disagree=1.

Similarly, their attitude toward an overall image is also analyzed on the same five-point scale. The data is analyzed using SPSS and MS Excel and represented through the means. Further, correlation analysis has been done to analyze the relationship between beliefs (independent variable) and overall image (dependent variable) and weights of attributes (independent variable) and overall image (dependent variable).

FINDINGS

Table 1: Profile of the Respondents

Characteristics	N	Percentage
Gender		
Male	53	53
Female	47	47
Age Group		
Below 20	24	24
20-35	43	43
35-50	22	22
Above 50	11	11
Educational Qualification		
Up to Intermediate	04	04
Graduate	38	38
Post Graduate	34	34
Doctorate	15	15
Others	09	09

More than half (53%) of the respondents are male, and (47%) are female. Most of the respondents (43%) in the sample are aged 20-35. 24% are in the age group below 20, 22% are in the age group of 35-50, and only 11% of respondents are in the age group above 50. 38% of the respondents are graduates, 34% are postgraduates, 15% are a doctorate, 9% are qualified in other professional and non-professional courses, and only 4% have their educational qualifications up to intermediate.

Table.2 Consumer Beliefs about Green Hotels

	N	Min	Max	Mean	Std dev
Good Hotels follow green practices	100	3	5	4.15	0.538891
The quality of Produts & services offered by green hotels are superior to other hotels	100	2	5	4.13	0.525222
Green hotels charge reasonable prices	100	2	5	3.17	0.769297
Green hotels offer more innovative products & services	100	2	5	4.20	0.608517
Green hotels have a good balance between the quality of services & environmental safety	100	3	5	4.27	0.617178
Green hotels have systems that are effective in environmental conservation	100	3	5	4.16	0.631177
Recycling programs used by green hotels are effective in environment conservation	100	3	5	4.21	0.655898
Green hotels contribute in creating environmental Sustainability	100	2	5	4.15	0.575159

This table shows consumer beliefs about green hotels. The table shows that respondents hold a positive attitude regarding green hotels beliefs. Except for the reasonable price, consumers have shown strong positive beliefs about green hotels for all the attributes, namely the good practices followed by green hotels, quality of products and innovativeness in the products and services offered by the green hotels, and balance between quality and environmental safety, recycling programs, environmental conservation and environmental sustainability. The consumers hold the moderately positive belief that green hotels charge a reasonable price.

Table 3 Weight (importance) Consumers Hold for Attributes of Green Hotels.

	N	Min	Max	Mean	Std dev
I ensure that the hotel that I check in should have a green tag	100	2	5	3.87	0.719919
The quality of services that are offered in hotels is essential for me	100	1	5	4.38	0.647918
I am willing to change the hotel if the green hotel charges a too high price	100	1	5	3.88	0.856113
I always ensure that the hotels I check in should contribute to environmental safety	100	3	5	4.13	0.645967
I always ensure that the hotels I check in should contribute to environmental sustainability	100	3	5	3.98	0.651029
I am willing to pay more if the hotel contributes in a big way to environmental conservation	100	1	5	3.83	0.71145

Table 3 shows the weights or the importance consumers hold for different attributes of green hotels. Consumers consider the quality of services offered by green hotels as the most important attribute, followed by the hotel's contribution to environmental safety. Contribution to environmental sustainability is the following important attribute for consumers when they choose a green hotels. Price, green tag and contribution to environmental conservation are the following essential attributes.

Table 4 Overall Image of Green Hotels

	N	Min	Max	Mean	Std dev
I am satisfied with the overall facility provided by the green hotels	100	3	5	3.95	0.575
I will visit this hotel over & again whenever I visit this place	100	3	5	3.94	0.616
I will endorse this hotel to my friends & relatives because of the green practices followed by this hotel	100	3	5	4.14	0.586
The services provided in green hotels are better than in other hotels	100	2	5	3.94	0.615

Table 4 shows the overall image of the green hotels. The table shows that Consumers are Satisfied with the overall services green hotels provide. They believe that services provided in green hotels are better than in other hotels, and they are willing to revisit green hotels. Consumers are also willing to recommend this hotel to their family and friends because of the green practices followed by green hotels.

Table 5 Testing of Hypothesis- correlation between consumers' beliefs regarding green hotels, weights of the attributes and overall image of Green hotels.

		Pearson Correlation	P value	Inference
H01	Beliefs about the attributes of green hotels & Overall Image of the green hotel	0.739495	0.00	Null Hypothesis is rejected
H02	Weight of Attributes of the green hotels that consumers hold & Overall Image of the green hotel	0.752781	0.00	The null hypothesis is rejected

The table shows the relationship between beliefs that consumers hold about green hotels, the weight of attributes that consumers hold about the attributes of the green hotels and the overall image of the green hotels. The value of the Pearson correlation between beliefs about green hotels and their overall image is 0.743351, which indicates a strong correlation. Similarly, the Pearson correlation between the weight consumers attach to attributes of green hotels, and the overall image of green hotels is 0.752781, which also shows a strong correlation. It can be inferred that consumers hold positive beliefs about the green hotels they have visited, and higher weights about the attributes that green hotel offers positively affect their overall image.

Positive correlation

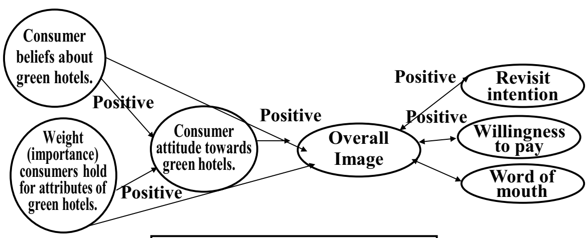

Fig 2 The Research model.

Summary and Conclusions

Most respondents are male (53%), and most (43%) are in the age group of 20-35. Most of the respondents (72%) are well educated, i.e. 38% of the respondents are graduates, and 34% are postgraduates.

Consumers have strong positive beliefs that green hotels follow green practices, have a good balance between the quality of services and environmental safety, have effective recycling programs for environment conservation and offer more innovative products and services, quality of products and services offered by green hotels are superior than other hotels, they have systems that are effective in environment conservation, and they contribute in creating environmental sustainability. Consumers hold the moderately positive belief that green hotels charge reasonable prices.

Consumers have attached the highest importance to the quality of products and services, followed by hotel's contribution to environmental safety.

Consumers are satisfied with the overall services provided by green hotels, have shown strong revisit intention, and are willing to recommend the green hotels to friends and family.

There is a strong positive correlation between consumers' beliefs about green hotels and their overall image. Consumers have shown a strong positive attitude toward their beliefs about the attributes of green hotels. Similarly, there is a strong positive correlation between weights that consumers have attached to different attributes of green hotels and the overall positive image of green hotels

Positive beliefs and the perception that green hotels offer all such attributes that the consumers hold essential, creating an excellent overall image.

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RESEARCH

CUSTOMER REACTION AND PURCHASE INTENTIONS AS INDICATORS OF THE EFFECTIVENESS OF DIGITAL MARKETING CHANNELS

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ABSTRACT

The internet plays a crucial role in our daily lives. For practically all of their work-related needs, corporate organisations use internet services. Marketing is one of the many business areas where the internet has applications. Advertising is no longer displayed in marketing. The introduction of the internet has altered how consumers are drawn in. Customers respond to marketing via digital platforms immediately, and the firms' messages quickly reach the general public. All different kinds of businesses are currently adopting certain digital marketing platforms. Different channels exist for digital marketing. The responsiveness and effectiveness of those channels have been researched in the past. But more research has to be done on how these channels translate into buying intent. By examining the responsiveness of digital marketing channels and examining their connection to purchase intents, this research makes an attempt to fill up this gap. Customers' receptivity to various digital marketing channels and the purchase intents sparked by those channels has both been examined in the current study. The association between the rate of responsiveness and purchase intentions has been further tested using correlation analysis. The findings demonstrate that social media marketing and internet advertising with high responsiveness result in high purchase intentions. Although SMS and affiliate marketing have high response rates, they are ineffective at converting those high response rates into actual buy intents. Thus, it can be said that internet advertising and social media marketing are the most effective forms of digital marketing.

Key words: *digital marketing, social media, online advertisement, efficient channels*

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INTRODUCTION

Digital marketing is a term for a marketing strategy that is frequently used to offer products and services to consumers via digital platforms. It encompasses both channels that go beyond online marketing as well as those that do not require the usage of the internet. Mobile phones (SMS and MMS both), search engine optimization (SEO), social media marketing (SMM), banner advertising, and other other forms of digital media are all provided by digital marketing. Because customers can access information at any time and from any location, digital marketing is very customer-friendly. Additionally, customers do not have to rely solely on what businesses have to say about their products and services because they can also read opinions from the media, friends, peers, and other people about those products and services.

The process of making changes to your website to make it more visible when users search for goods or services on any search engine is known as search engine optimization (SEO). A website that ranks higher on the search results page and appears more frequently in the list of search results will likely receive more visitors, who may then become customers, when we search for something on a web search engine. Search engine optimization targets a variety of queries, including news searches, vertical search engines for certain industries, academic searches, picture searches, video searches, and search engines for images and videos.

Local search engine optimization is a type of search engine optimization that helps your company appear more prominently in Google's local search results. It is very similar to SEO. While the procedure for ranking a business for local search is similar to SEO, it also contains some specialised factors, whereas SEO is more concentrated on national and international searches.

Online advertising, often known as online advertising, is a means for businesses to spread the word about their goods and services. It offers articles and advertisements that are created with the consumer's interests in mind. Publishers post information on the goods and services offered by businesses on their websites so that visitors and customers can access it without charge.

Email marketing, in its broadest meaning, refers to when businesses send messages about their products or services using electronic mail to their current or future customers. Email marketing is defined as when some commercial communication is conveyed to a group of individuals utilising email. The phrase often refers to sending emails to customers with the intention of improving the relationship between businesses and their present or past clients, winning over potential new clients or persuading existing ones, and fostering repeat business.

One of the most significant digital marketing channels is social media marketing. Social media marketing refers to the use of websites and social media platforms to advertise a good or service. SMM is a computer-based application that enables users to generate and discuss concepts, details, and visuals regarding a company's goods or services. More than any other sort of website, social media websites are used by the majority of internet users. Social media enables online interaction and the development of communities and relationships between individuals, businesses, and other organisations. Social media platforms provide direct communication between customers and businesses. Social media platforms serve as both a customer service channel and a word-of-mouth marketing tool for businesses. Facebook, Twitter, YouTube, Linkedin, Flikr, and Google+ are examples of SMM channels.

Text messaging is a method for mobile and smart phone users to send information about goods or services. Information can be sent by the company in text, image, audio, or video format. SMS, or short message service, is still a fairly common marketing tool for businesses. Companies can send marketing messages at any time, and there is a good chance that they will be viewed. This method can be used by businesses to collect customer feedback and other insightful comments.

In affiliate marketing, the firm selects affiliates to drive traffic to the company's websites. The company then pays the affiliates a commission for the traffic the affiliates drive. There are typically two approaches to affiliate marketing. The first is for a company to offer others an affiliate programme or to become an associate of another company. When a business runs an affiliate programme, the business must pay affiliates a commission. The company's major objective in this case is to identify affiliates who can penetrate unexplored markets.

Pay per click (PPC) is a method by which businesses, as opposed to earning these clicks themselves, employ search engine advertising to create traffic to their websites. The low cost and better interaction with the goods and services make this method a very practical option for businesses to advertise.

REVIEW OF LITERATURE

Companies are under pressure to adopt digital practises; firms' level of involvement in digital marketing depends on how well they comprehend its advantages and use it. To improve digital marketing, relationship-based interactions with clients are required. (Tiago, 2014)

Social media has grown in importance as a marketing and brand-awareness tool in digital marketing, but it is ineffective without the support of other digital and traditional marketing channels. Traditional media's effectiveness is waning, so developing a social media strategy is crucial to overcoming the difficulties that social media presents. (Odhiambo, 2012).

The relevance of digital marketing is increasing. In order to obtain a competitive edge and build brand awareness, housing companies emphasise the efficient use of digital marketing platforms..(Çizmeci, 2015)

Small and medium-sized businesses are unable to take advantage of the chances that digital media platforms offer them because they do not fully utilise the capabilities of the digital marketing platform. The fundamental changes in communication brought about by digitization are not appreciated by SMEs. (Taiminen, 2015).

Customers may produce great content for businesses through digital marketing channels, thus this is where businesses need to invest. However, businesses also need to do two things. They must first engage consumers, and then they must properly analyse the outcomes since unsatisfactory results will follow from improper analysis on the part of businesses. Companies should be prepared to alter their operations in response to changes in digital platforms, particularly in social media and the individuals who utilise it. (Bäck, 2018)

Consumers assess a product's quality based on a number of factors, including pricing, packaging, and the product's appearance on digital platforms, rather than just its physical attributes. (Vranešević, 2003)

New digital culture is moulding or shaping young people. The fundamental characteristics of interactive media, including personalisation, constant connectivity, peer-to-peer networking, immersion, engagement, and content production, are representative of the ways that young people are both influencing and being influenced by the digital era. Due to their passionate usage of new media and significantly enhanced purchasing power, teens have become the main focus of a new "media and marketing" strategy. Adolescents can use digital media to explore essential developmental tasks such as quick and continuous peer contact, self-expression, identity discovery, social engagement, mobility, and independence. Teenagers' relationships with digital media, which foster intimacy with the brands and products that are now practically all around them, are being actively used by the advertising industry (often driven by food and beverage marketers). for instance, well-known eateries and drink producers like Coca-Cola, McDonald's, Burger King, and Kentucky Fried Chicken (KFC). (Montgomery, 2009)

Children's cognitive, emotional, and conative reactions to brands are influenced by how they appear in online games, as well as how they feel about the game itself. Additionally, exposure to the brand placement, age, and prior brand use all had a three-way interaction effect on behavioural intentions. Teenagers who had never used the brand before were more strongly influenced by the brand placement than those who had. (Van Reijmersdal, 2010)

Understanding the value-enhancing potential of digital platforms, such as social media campaigns, is crucial because when a customer uses social media and interacts with a page from which the business operates,they act favourably when it comes to brand awareness, word-of-mouth marketing, and purchase intent—unless the page is overloaded with information, in which case it has a negative impact on all of the aforementioned factors as well as other factors. (Hutter, 2013)

Digital marketing for B2B is an inbound strategy that works well through websites, social media, and value-added content and is seen as a highly helpful tool for building and maintaining a trustworthy brand status. Understanding the demands of the audience and their buying decision cycle is necessary to produce meaningful content for B2B audiences. Effective information that may be characterised as being valuable, relevant, captivating, and timely should be present. The goal of content marketing needs to shift from "selling to helping" because it plays a critical function in digital marketing. (Holliman, 2014)

By identifying the characteristics of SMM activities and looking at the connections between those perceived activities, relationship equity, value equity, brand equity, customer equity, and buy intentions, one can gauge the effectiveness of social media marketing for luxury fashion brands. The five constructs for perceived activities are word-of-mouth, interaction, trendiness, entertainment, and interaction. And Brand equity has a strong negative impact on customer equity, whereas value equity and connection equity have no discernible effects. This is true for the link between customer equity drivers and customer equity. Value equity and relationship equity both have substantial positive effects on purchase intention, whereas relationship equity has no meaningful impact. The connection between purchase intent and consumer equity is also important.(Kim, 2012)

Additionally, uniqueness, CSR, and home country origin are also important factors for understanding price premium. The image of the product or service on digital platforms, particularly after the quality of the product or service, contributes to the consumer in understanding the price premium they are paying for the product and services. (Anselmsson, 2014)

Digital marketing channels are becoming a crucial component of many businesses' marketing efforts. Using any device, including smartphones, laptops, tablets, televisions, game consoles, and digital billboards, as well as media like social media, search engine optimization, videos, content, e-mail, and more, small businesses can easily adopt digital marketing as an effective and affordable method of advertising. If businesses prioritise user needs above everything else, they might experience greater success with digital marketing. Test, learn, and develop should be the three watchwords that guide all digital marketing initiatives. To find the best strategy for generating good digital marketing performance, businesses should develop novel consumer experiences and focused media tactics. (Yasmin, 2015)

PROBLEM STATEMENT AND RESEARCH GAP

The internet plays a crucial role in our daily lives. The majority of the work activities conducted by commercial organisations involve the use of the internet. Marketing is one of the many business areas where the internet has applicability. Advertising is no longer displayed in marketing. The introduction of the internet has altered how consumers are drawn in. Customers respond to marketing via digital platforms immediately, and the firms' messages quickly reach the general public. All different kinds of businesses have adopted digital marketing platforms to some extent. Given the significance of digital marketing in today's industry, it is imperative to research the effectiveness of digital marketing channels. The literature to date has discussed numerous digital marketing channel types and how consumers react to them. The current body of literature says little about how customer responses actually lead to buy intentions. This discrepancy is highlighted in the current investigation. In this study, consumer response was assessed, and then responsiveness and purchase intentions were connected.

OBJECTIVES

To comprehend the idea of digital marketing and the many channels it uses.

To determine how responsive clients are to different digital marketing channels.

To determine the purchase intentions linked to various digital marketing channels.

To investigate the link between consumer receptivity to different digital marketing channels and consumer purchase intentions.

RESEARCH METHODOLOGY

Source of data- primary data.
Sample size- 100
Sampling method- convenience sampling.

Tool- structured questionnaire through personal interviews or email.

METHODOLOGY

A pilot study with 15 participants was first conducted. After the pilot study, the questionnaire was changed. A 150-person sample was used, and email and in-person interviews were used to get the data. After final editing of the questionnaires, only 118 of the 124 replies that were received by email and personal interviews were determined to be legitimate. The convenience sampling approach was used to gather the data. Three sections make up the questionnaire. Questions about the respondents' profiles are asked in the first section. Questions about customer receptivity to various forms of digital marketing are asked in the second section. The third section includes inquiries about potential purchases connected to different digital marketing channels. On a scale of 1 to 5, where 1 is extremely low, 2 is low, 3 is moderate, 4 is high, and 5 is very high, the respondents were asked to rate the response rates to digital marketing channels. Similar to this, the purchase intentions linked to different digital marketing channels were scored on a scale of 1 to 5, where 1 represents a low buy intention and 5 represents a strong purchase intention. All variables are calculated using the mean. The link between independent factors (responsiveness to digital marketing channels) and dependent variables has been examined using correlation analysis (purchase intentions). MS Excel and SPSS are used to evaluate the data.

HYPOTHESES

H01there is no positive correlation between customers' responsiveness towards SEO and their purchase intentions.

H02there is no positive correlation between customers' responsiveness towards online marketing and their purchase intentions.

H03there is no positive correlation between customers' responsiveness towards email marketing and their purchase intentions.

H04there is no positive correlation between customers' responsiveness towards SMS & MMS and their purchase intentions.

H05there is no positive correlation between customers' responsiveness towards SMM and their purchase intentions.

H06there is no positive correlation between customers' responsiveness towards affiliate marketing and their purchase intentions.

RESULTS AND HYPOTHESES TESTING

DEMOGRAPHIC PROFILE OF THE RESPONDENTS.

59% of all responders, or the majority, are between the ages of 21 and 30. 31 to 40 year olds make up 21% of the respondents. 9% of respondents are under the age of 20, compared to 6% of respondents who are between the ages of 41 and 50 and 5% of respondents who are over 50. In terms of gender, 68% of respondents are men and 32% are women, making men the majority. The majority of respondents, or 45%, are graduates, followed by 30% of post-graduate respondents, 10% of doctoral respondents, and 10% of intermediate respondents. Additionally, 5% of the responders have completed high school.

Table 1–Customers' responsiveness towards different digital marketing channels

		Mean	Standard Deviation
	Search engine optimization		
1	Relevant content.	3.92	.76321
2	Rank on search engine.	3.85	.89402
	Online marketing		
1	prioritizing clicks or pop up ads	2.45	1.07582
2	Well designed or attractive banner ads.	3.83	1.05654
3	Image of the publisher	4.01	.81523
	Email marketing		
1	Extraordinary heading.	2.00	.91056
2	Simple but attractive heading.	3.79	.856
	SMS AND MMS		
1	SMS only by numbers	4.61	.61555
2	SMS with company names	2.41	.91234
3	Straight forward MMS	4.62	0.60356
	Social media marketing		
1	Content on the pages or groups.	4.62	0.56231
2	Content directly post by celebrities	4.02	0.57102
3	Content indirectly post by celebrities	4.55	0.55263
4	Attracting images/videos of company's product	4.20	0.572359
5	Direct interaction	3.31	0.720919
6	Straight forward information about the price and availability of the products and services	3.53	0.515159
7	Short term Unskippable ads	3.32	0.62035
8	Engaging but skippable ads	2.30	0.41025
	Affiliate marketing		
1	Native advertisement.	4.45	0.695967
2	M-commerce usage.	4.71	0.816113
3	Permission.	4.60	0.697918

Source: field survey

Customers are very responsive to mobile commerce, simple MMS, SMS solely by numbers, content on pages or groups, content indirectly provided by celebrities, permission, native advertisement, as indicated in the table. directly posted celebrity content, appealing photos and videos of a company's goods, the publisher's image, content that matters. Customers respond moderately to search engine rankings, attractive or well-designed banner advertising, information that is clear and concise about the cost and availability of the goods and services, Short-term, skippable advertisements direct communication Prioritizing clicks or pop-up advertising, SMS with brand names, compelling but skippable ads, or extraordinary headings do not seem to have much of an impact on the customers.

Table2- Customers' purchase intentions created through different modes o digital marketing channels

		Mean	Standard Deviation
	Search engine optimization		
1	Relevant content.	3.21	.71312
2	Rank on search engine.	2.30	.79503
	Online marketing		
1	Prioritizing clicks or pop up ads	2.01	1.19132
2	Well designed or attractive banner ads	4.00	1.21324
3	Image of the publisher	3.83	0.81509
	Email marketing		
1	Extraordinary heading.	2.63	.91543
2	Simple but attractive heading.	3.30	.852
	SMS AND MMS		
1	SMS only by numbers	4.69	.55689
2	SMS with company names	3.83	.88124
3	Straight forward MMS	5.27	0.417178
	Social media marketing		
1	Content on the pages or groups.	5.28	0.63127
2	Content directly post by celebrities	4.28	0.480056
3	Content indirectly post by celebrities	4.11	0.555898
4	Attracting images/videos of company's product	4.17	0.595159
5	Direct interaction	3.88	0.619919
6	Straight forward information	3.91	0.565259
7	Short term Unskippable ads	3.90	0.662025
8	Engaging but skippable ads	2.01	0.393567
	Affiliate marketing		
1	Native advertisement.	3.25	0.332156
2	M-commerce usage.	3.77	0.333234
3	Permission.	2.99	0.533621

Source: field survey

As indicated in the table, content on the pages or groups, simple MMS, and SMS just by numbers all work to increase buy intent. Straightforward information regarding the price and availability of the items and services, Content indirectly posted by celebrities, Content directly posted by celebrities, Attractive photographs and videos of the company's products, M-commerce usage Quick Unskippable advertisements Well-designed or appealing banner adverts tend to elicit moderate purchase intentions, Direct interaction, the publisher's image, a straightforward yet attractive header, and content that is relevant. Permission, SMS with brand names, remarkable headings, Native advertisements, rankings on search engines, compelling but skippable ads, prioritising clicks or pop-up ads all lead to low buy intents.

Table 3- Testing of Hypothesis- Correlation between frequency of tours and consumer preferences

		Pearson Correlation	P value	Inference
H01	SEO	.343**	.000	Null Hypothesis is rejected
H02	Online marketing	.738**	.000	Null Hypothesis is rejected
H03	Email marketing	.308**	.002	Null Hypothesis is rejected
H04	SMS and MMS	.191	0.61	Null Hypothesis is accepted
H05	SMM	.814**	.000	Null Hypothesis is rejected
H06	Affiliate marketing	.024	.781	Null Hypothesis is accepted

Source: Author's Calculations

**. Correlation is significant at the 0.01 level (2-tailed).

Both the reactivity to SEO and the responsiveness to email marketing and purchase intents are positively correlated. A high positive association exists between internet marketing responsiveness and purchase intentions. A similar correlation exists between social media marketing responsiveness and buy intentions. The relationship between responsiveness to SMS and MMS and buying intentions is highly shaky. Purchase intentions and affiliate marketing responsiveness do not correlate.

CONCLUSIONS

Customers respond well to mobile commerce, simple MMS, SMS with merely numbers, engaging but skippable adverts, and extraordinary headings. They respond less well to SMS with company names.

High buy intentions are established by content on the pages or groups, simple MMS, and SMS solely by numbers, whereas low purchase intentions are produced by interesting but skippable advertisements, prioritising clicks, or pop-up ads.

High levels of responsiveness to social media marketing and online advertising result in high levels of purchase intention, high levels of responsiveness to SEO and email marketing result in moderate levels of purchase intention, and high levels of responsiveness to SMS and affiliate marketing do not result in purchase intention. Although SMS and affiliate marketing receive high client response rates, these forms of digital marketing do not lead to buy intents. It may be argued that social media marketing and online commercials are the most effective digital marketing channels since they generate high purchase intents and have high response rates.

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RESEARCH

A STUDY ON REMANUFACTURING AND CONSUMER PSYCHOLOGY IN INDIA

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1.0 INTRODUCTION

1.1 Introduction to Sustainability
Sustainability is the philosophy of adapting ways to meet the needs of the present generation without compromising the ability of future generations to meet their own. The goal of sustainability is to create a world that can be sustained indefinitely, where resources are used in a responsible and equitable manner, and where environmental, social, economic systems, and human activities are in balance. Sustainability seeks to preserve natural resources and ecosystems, and address issues such as climate change, poverty, and social inequality.

The goals of sustainability mentioned earlier can be represented by three pillars, also known as the triple bottom line:

Environmental sustainability, which focuses on conserving natural resources and reducing pollution.

Social sustainability, which focuses on creating a fair and just society that promotes human dignity, equality and well-being.

Economic sustainability, which focuses on creating and maintaining a strong and stable economy that supports growth and prosperity.

Sustainability can be promoted in many ways, including reducing waste and consumption, using renewable energy sources, and investing in sustainable technologies. The need and importance of sustainability is rising with the growth of industries and the advancement of society. Long-termalternatives to facilities, and an integration of sustainable practices in human lifestyle is a key factor in the application of sustainability.

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One such approach that improves the sustainability of a society and improves overall life is Circular Economy (CE).A circular economy is an economic system in which resources are kept in use for as long as possible, and waste and pollution are minimized. The goal of a circular economy is to create a sustainable and regenerative system in which materials and resources are used and reused, rather than being discarded and replaced.

This review covers the market for Remanufacturing, an application of the circular economy in India, and analyses consumer psychology.

1.2 INTRODUCTION TO REMANUFACTURING

Remanufacturing is the process of restoring and rebuilding of a used product to its equivalent for reuse, resale and recycling. Remanufacturing is an industrial process whereby used products are restored to useful life (Wei et al., 2015). This process can involve replacing parts, repairing components, and inspecting the end product for quality assurance. It is an increasingly popular way to reduce waste and extend the life of a product.

This concept has recently gained significant importance because of increased awareness by corporate leaders and improving government regulations (Subramoniam et al., 2010; Govindan et al., 2016; Li et al., 2018). Remanufacturing isbecoming an important part of the circular economy and is beneficial to both businesses and customers. For businesses, it can help reduce costs and increase profits, while for customers it can help ensure they are buying reliable and high-quality products.

Remanufacturing involves a number of steps, depending on the product. It can involve stripping down the product to its core components, repairing and replacing parts, and then reassembling it with new parts. This process does not just involve repairing existing parts; it also involves a thorough inspection and testing process to ensure the product is safe and reliable. Technological upgrades of some parts or modules are also possible during the remanufacturing process (Dekker et al., 2000; Guide et al., 2003).

Remanufacturing can be used for a variety of products, from automotive parts to electronics. It is becoming increasingly important as companies look for more sustainable and cost-effective solutions. It is an effective way to reduce waste and save materials, while at the same time providing cost-effective, high-quality products to customers.

1.3 INTRODUCTION TO REMANUFACTURING IN INDIA

With growing concerns regarding environmental protection, many businesses have been encouraged to addressenvironmental issues and face many challenges in doing so. With growing concerns regarding environmental protection, many businesses have been encouraged to address environmental issues and face many challenges in doing this (Jianget al., 2011).

Remanufacturing represents a significant End-of-Life (EoL) process, which could potentially generate both environmental and business benefits. It extends product longevity while reducing raw material consumption, energy usage and environmental impact (Subramoniam et al., 2013). Hence, remanufacturing is considered a key strategy for promoting sustainable development (Matsumoto and Ijomah, 2013).

Remanufacturing in India is becoming increasingly important in today's economy. Many industries are turning to remanufacturing as a way to reduce costs and increase efficiency. There are a variety of organizations in India that offer remanufacturing solutions, such as the Automotive Remanufacturing Federation India (ARFI), the Indian Re-Manufacturing Council (IRMC), and many more.

As India is the most populated country in the world, a need was identified for remanufacturing a decade ago. The country is still trying to tap into the vast potential of the industry. While it is true that the remanufacturing industry in India is not as developed as in other countries, there has been a growing trend of organizations entering this field in recent years. Several initiatives by the government and private companies have been taken to promote remanufacturing and circular economy in India. However, there are still challenges that need to be addressed, such as lack of awareness and proper infrastructure, to fully realize the potential of the remanufacturing industry in India. Growing concerns about environmental problems such as climate change and biodiversity loss, and social problems related to poverty, health, safety and inequity, have fostered new approaches to resource-effective, sustainable product innovation (Liu et al., 2000, Chakrabarti, 2001, Chakrabarti, 2004, Chakrabarti et al., 2004, Chakrabarti and Bligh, 1996).

Remanufacturing in India is a process of taking used or damaged components and either repairing and restoring them to a near-original condition, or upgrading them to meet newer standards. The industry has experienced significant growth in the last decade. Many companies are capitalizing on this trend by introducing innovative remanufacturing technologies and processes. Companies are tapping into the potential of this manufacturing industry by offering services such as reworking on the entire machine and provide remanufactured parts.

With the growing demand for remanufactured components, companies are increasingly investing in and developing new remanufacturing technology procedures, such as 3-D printing, laser welding, reverse engineering, and advanced diagnostics. This leads to increased efficiency and precision in the remanufacturing process. Additionally, there are numerous processes specific to remanufacturing such as inspection, grading, cleaning, and re-engineering, making this industry a technically demanding one.

Remanufactured components are also often cheaper than new ones, making them attractive to cost-conscious customers. Additionally, these components are typically backed by a warranty, providing customers with a sense of security. The growing popularity of remanufactured goods has given the industry a major boost, with many organizations now turning to the remanufacturing technology sector to remanufacture parts, improve their supply chain, and reduce their carbon footprint.

By definition remanufacturing is “the process of returning a used product to at least OEM (Original Equipment Manufacturer) original performance specification from the customers’ perspective and giving the resultant product a warranty that is at least equal to that of a newly manufactured equivalent” (Ijomah, 2002).

Remanufacturing is helping India to become a more sustainable and eco-friendly economy. It is reducing the country's dependence on imported goods, which is helping to increase India's competitiveness in the global market in addition to improving overall sustainability. Additionally, re-manufacturing helps create jobs in rural areas, which can provide much-needed employment opportunities in an increasingly urbanized country. Re-manufacturing also helps to conserve natural resources, reduce pollution and waste, and can even help to reduce the cost of production. In short, remanufacturing is providing India with a number of benefits, both economically and environmentally.

1.4 INTRODUCTION TO CONSUMER PSYCHOLOGY

Consumer psychology is the study of why and how people make purchase decisions, including the psychological and social factors that influence their buying habits. It focuses on aspects such as consumer behaviour, perception, motivation, decision-making, and attitudes, with the goal of understanding the factors that drive consumers to purchase certain products or services. Consumer psychologists use their insights to inform marketing and advertising strategies, product design, and other aspects of product development and customer experience.

The perception of remanufactured products can vary among consumers, and it depends on various factors such as the quality of the product, the brand reputation, the price, and the consumer's prior experiences with remanufactured products. In general, remanufactured products are seen as a more sustainable and environmentally friendly option, as they help reduce waste and conserve resources. Some consumers also view remanufactured products as a cost-effective alternative to brand-new products, and appreciate the fact that they can get high-quality products at a lower price.

Studies have shown that consumers have a negative perception of remanufactured products and are unlikely to embrace them. To promote the growth of a circular economy, it is essential to gain a deeper understanding of consumer attitudes and behaviours towards remanufactured products. The research examines the interplay between micro-level consumer attitudes and macro-level factors such as price, government incentives, and environmental benefits. The results indicate that consumer attitudes towards remanufactured products play a crucial role in determining their likelihood to switch from buying new products to remanufactured ones. (John Wiley & Sons, Ltd and ERP Environment 2016)

1.5 INTRODUCTION TO CONSUMER PSYCHOLOGY IN INDIA

The acceptance of remanufactured products by consumers in India is crucial to the success of closed-loop supply chains and the achievement of a circular economy. Despite this, research suggests that consumers may be hesitant to purchase remanufactured products. This highlights the need for a deeper understanding of consumers' attitudes and purchase intentions towards these products. By studying consumer behaviour and preferences, businesses can develop effective strategies to promote the uptake of remanufactured products and encourage the transition towards a circular economy. A better understanding of consumer attitudes and intentions towards remanufactured products is essential for popularizing these products and achieving the goal of a more sustainable future. It has been well documented that various elements, such as societal standards, cost, demographics, and accessibility, play a significant role in shaping consumer choices related to environmentally responsible purchasing. (Bhate and Lawler, 1997; Lingyun et al.,2011).

2.0 LITERATURE REVIEW

2.1 REMANUFACTURING

The basic design requirements for a product to be suitable for remanufacturing are that it may be easily disassembled, cleaned, replaced and re-assembled (Zhang et al., 2011).The second aspect of product maturity is related to both the speed of technological change and physical lifespan of products (Matsumoto, 2010). As technology evolves rapidly, products can become outdated quickly and have a shorter lifespan. On the other hand, some products have a longer physical lifespan but may be impacted by changes in technology. If a new product is quickly becoming outdated due to rapid technological change, component replacement may be a more viable option than completely remanufacturing the product. This allows the product to be updated with the latest technology. On the other hand, if the lifespan of the product is short then there is no use of remanufacturing as it may need to be discarded within the little time of remanufacturing the product.

Sufficient demand for remanufactured goods is needed to sustain businesses. The profitability of remanufacturing depends mainly on the customer demand for remanufactured goods (Seitz 2007). However, customers may have a negative perception of remanufactured products because they believe they may be of inferior quality compared to new goods (Abdulrahman et al., 2015).

The quality of remanufactured products produced by original equipment manufacturer OEM, and independent remanufacturer (IR) is different. The difference of sellers, prices and brands will affect consumers' perception of the quality of remanufactured products (Abbey et al., 2015). Some of the factors that affect the decision of the businesses to practice remanufacturing are business feasibility, firm's strategic factors, policy factors etc. Primarily the technical aspects being the technicality, product design where it can be disassembled and reassembled at ease. Furthermore the manufacturing process of any product should be remanufacturing-friendly (Subramoniam et al., 2010) and also the production cost (Ijomah, 2009).

Since remanufacturing is labor intensive, availability of skilled workers is yet again another influencing factor.The remanufacturing process tends to be quite complex and must be handled by skilled workers (Lundmark et al. 2009). Understanding a product's specifications is important for workers to disassemble it properly and identify any parts that need to be replaced in order to restore its original performance. One of the key advantages of remanufacturing is that it requires less skilled labor compared to conventional manufacturing (Lund 1984). Financial considerations are a crucial factor in the success of remanufacturing operations. The expenses of setting up remanufacturing and the demand for remanufactured products both have an impact on the profitability of the business. The main costs of remanufacturing stem from the extra resources needed to bring the product back to its original performance level, including direct production costs, ensuring quality, and building a reverse logistics network to obtain cores. According to numerous researchers, having efficient reverse logistics systems is deemed to be the foundation of remanufacturing operations (Matsumoto 2010).

The perception of remanufactured goods varies among consumers. Some consumers see remanufactured goods as a cost-effective and environmentally friendly alternative to new products, while others view them as lower quality or less reliable. Factors that can influence a consumer's perception of remanufactured goods include the quality of the remanufacturing process, the brand reputation of the original product, and the price and availability of new products. In general, the perception of remanufactured goods is improving as the quality and reliability of remanufactured products improves, and as consumers become more aware of the environmental and financial benefits of purchasing remanufactured goods.

2.2 CONSUMER PSYCHOLOGY

The field of remanufacturing industrial products has received limited attention when it comes to analyzing consumer markets and perception of remanufactured products.(Abbey et al., 2015b, Jiménez-Parra et al., 2014, Michaud and Llerena, 2011). There is a need to deepen our understanding (Souza, 2013, Sinha et al., 2017),of the marketing challenges involved with remanufactured products in order to better analyze the relationship between consumers and these markets. (Atasu et al., 2010, Govindan et al., 2015, Subramanian and Subramanyam, 2012).

A classification has been established, dividing consumers into two segments: those who are not particularly inclined towards either original or remanufactured products, but who do respond to price reductions, and those who exhibit a clear preference for original products and have a limited response to price reductions, but exhibit an aversion to remanufactured products. (Abbey et al. (2015a)

Regarding the purchase intention for remanufactured products (PI), literature suggests that several factors on the supply side have an impact on consumers' purchase intention for remanufactured products, including the reputation of the seller, the identity of the remanufacturer (whether it is the original equipment manufacturer or a third-party remanufacturer), and marketing initiatives. (Subramanian and Subramanyam, 2012, Jiménez-Parra et al., 2014)

Aside from the factors mentioned, such as performance, safety, and maintenance, (Subramoniam et al., 2009; Wang et al., 2018) there may be other elements that impact consumers' trust in remanufactured products. A lack of consumer awareness and interest has been identified as a major obstacle in transitioning to a circular economy (Kirchherr et al., 2018). Although much effort has been made in studying the operational aspects of remanufacturing, the marketing side of remanufactured products has received relatively limited attention in the existing literature.

In order to encourage environmentally conscious consumers to choose green products, effective marketing strategies are needed. (Borin et al., 2013; Chen and Chang, 2012). Eco-labeling, green packaging, and a positive brand image have been found to be effective ways to increase demand for these products. For example, eco-labels serve as a way for consumers to identify environmentally-friendly products, and research has shown that eco-labels, such as the "dolphin-safe" label on canned tuna, can positively impact consumer purchase intention (D'Souza, 2000). Additionally, the green packaging of a product can also attract consumer attention (Kong et al., 2014). Companies that are successful in promoting their eco-friendly image through advertising may also influence consumer purchasing decisions (Dangelico and Vocalelli, 2017).

A research was conducted with multiple constructs to analyze the Purchase Intention (PI) of Consumers. This model consists of nine constructs, including Remanufactured Product knowledge, personal benefits (PBN), Green Awareness (GA), Market strategy, Risk Perception, Subjective Norm, Perceived Behaviour Control(PBC), Attitude (AT), and Purchase Intention (PI), with PI serving as the dependent variable and AT acting as the mediating variable. The remaining constructs are the independent variables. This was then compiled as a questionnaire and sent to students at six Indian universities to answer on a seven-point scale.

The questionnaire was divided into two parts, the first of which collected personal information from the respondents, such as their age, gender, education, background, and understanding of remanufactured products. The second part aimed to gauge the consumer's opinion on purchasing remanufactured products and was designed to measure the following constructs: PBN, RP, GA, MS, AT, PBC, SN, RP, and PI. These constructs were selected based on a comprehensive literature review covering the purchase intention of green and remanufactured products, as well as considering the Indian market context. Additionally, the questionnaire was tested for validity and reliability by administering it to 280 students who possess electronic devices such as mobile phones and laptops. The results of this pre-test were used to improve the questionnaire, which led to improved reliability measurement indices, such as Cronbach's alpha.

The score of Cronbach's alpha was used to ensure the internal reliability of the model and it was expected to exceed the recommended value of 0.7 (as suggested by Hair et al., 1998). The results indicated that the score of Cronbach's alpha for each construct was greater than 0.7, demonstrating a strong internal reliability of the model. The validity and internal consistency of the questionnaire were further evaluated using three criteria, including: the values of factor loading for each indicator should be more than 0.5, the composite reliability for each construct should be greater than 0.8, and the average variance extracted for each construct should be more than 0.5. Additionally, the correlation coefficient between any construct and other constructs should be weaker than the square root of the average variance shared within a construct to fulfil the discriminant validity criteria (Fornell and Larcker, 1981).

Overall, the results indicated that consumers' purchase intention towards remanufactured products was positively impacted by factors such as attitude, social norm, personal benefits, marketing stimulus and product knowledge, and negatively impacted by product reliability. Attitude was found to be the most significant factor, followed by product knowledge, personal benefits, social norm, and marketing stimulus. Meanwhile, factors such as green awareness and price-quality comparison were found to have no significant influence on purchase intention. The research also highlighted that consumers' attitude could be positively influenced through the provision of adequate product knowledge, monetary benefits, and green awareness. Personal benefits had the greatest impact on attitude, followed by product knowledge and green awareness, while product reliability had a negative impact. The findings of this research provide practical implications for remanufacturers and marketing managers to increase the popularity of remanufactured products among consumers by promoting positive attitudes towards them.

3.0 METHODOLOGY

This study is a review of literature followed by depth interviews. The review of literature was carried out from articles since 2000 till 2018 focused on articles related to remanufacturing.

The questions asked for respondents of depth interviews are as follows:

Basic qualifications and experience?

What do you know about the term remanufacturing?

Could you tell me about a few remanufactured products that you are aware of (if at all)?

Have you purchased any remanufactured product? If yes, could you please elaborate on the same?

What factors/parameters did you consider or would you consider while purchasing a remanufactured product?

Would you recommend it to others?

Which class of products/goods would you not want to consider buying remanufactured products?

Would you consider the brand while buying a remanufactured product?

Do you know somebody who purchased a remanufactured product? If yes, what product was it?

What is your perception about remanufactured goods?

Would you consider buying a remanufactured product if it is certified and branded in the similar way as that of other products?

What is your experience of using remanufactured products?

Why according to you, should one buy remanufactured products?

4.0 FINDINGS :

FINDINGS FROM LITERATURE REVIEW

To increase the popularity of remanufactured products among consumers, it is important for the remanufacturers and government to work together to create a positive image for these products. By providing accurate information about their benefits, specifications, and warranty, consumers may feel more confident about the quality of remanufactured products and be less likely to have negative perceptions about them. However, due to prior ownership and potentially incorrect perceptions, some consumers may still view remanufactured products as low quality and unsafe. (Abbey et al., 2015).To mitigate this negative perception, educational campaigns can be used to help consumers understand the benefits of these products. Additionally, this research highlights that social influence is a significant factor in consumers' purchasing intentions, as they are more likely to buy remanufactured products if they receive approval from those who have significant impact on them. As a result, marketing managers should target these influential people to drive demand for remanufactured products.

Additionally, the study found that both personal benefits (PBN) and GA can have a positive impact on the attitude (AT) towards remanufactured products. Thus, both firms and the government should focus on promoting both monetary and environmental benefits related to these products. This presents a potential market opportunity in developing countries, where consumers often prioritize low-cost products. The significance of MS in shaping PI (Moktadir et al. 2018) highlights the importance of firms adopting green marketing tactics, such as eco-labeling and environmentally-friendly packaging, to increase the appeal of remanufactured products among eco-conscious consumers. However, the negative impact of RP on both AT and PI suggests that remanufacturers need to address the lack of understanding around the remanufacturing process by providing more information and offering tours of their facilities, and sellers should provide detailed information about the products to remove any uncertainties in the minds of consumers. It must be kept in mind that the findings of this study cannot be applied to all other nations as there may be cultural and demographic differences that influence consumer behavior. This has been highlighted by previous research studies as well (Sundin et al., 2008; Matsumoto et al., 2017).

To further understand and study the psychology of a general demographic of people with respect to their understanding of remanufactured products and purchasing decisions, in depth interviews were conducted for 12 respondents. These people were selected from different backgrounds and age groups to simulate a more diverse range, similar to the Indian market. It was also selected such that each person had the power to purchase. Each respondent was first given a fundamental briefing of the remanufacturing process to note their familiarity with the same. Among the many tangents explored with this interview, the primary questions were with respect to the subject's perception of remanufacturing; their previous experience or purchase of the same; the availability, quality and awareness with which the purchase decision was made; their satisfaction with various aspects including cost and their confidence in remanufacturing as a sustainable concept.

FINDINGS FROM THE DEPTH INTERVIEWS:

The findings from the depth interviews showed the levels of awareness of people from different backgrounds varying from home maker to mechanical industry professionals as well as retired professionals who provided details about their purchasing psychology. Nearly half the respondents had an average understanding of remanufacturing prior to the interview. However, the term was often confused with the process of recycling. The responses were divided in respondents - those familiar with remanufacturing and indicating some experience, and those new to the concept.

The respondents with more than 12 years of experience exhibited their understanding of remanufacturing which was moderate. They were partly aware about making purchases of remanufactured products/services and also the methods employed to remanufacture. A popular observation that was shared was that certain types of plastics were not of substantial quality after the process of remanufacturing and hence led consumers to refrain from using. Another subject had an unpleasant experience with remanufactured wood for cots. They mentioned that it was not durable as it got damaged and rendered useless within 4 years as against the normal cot.

Consumers would not have a clue of all the parts that get into the product since those parts would have been supplied by several vendors in addition to the company's facilities thereby making it difficult to share the details of remanufacturing. The majority of the respondents opined that consumers were comfortable using products which had remanufactured parts and did not doubt the quality or durability for most products. Remanufactured plastics and wooden material-based products were found to be less reliable and it also depended on the product, application, requirement as shared by the participants.

Another set of respondents who had a satisfactory experience with remanufacturing, mentioned repurposing of vitrified tiles to curate a marble finish tile blend, proved to be more durable and scratch resistant while also providing aesthetic appeal.

All respondents agreed that warranties and certification were a must to prove reliability for remanufactured products resulting in sales. The brand was also a determining factor in purchase decision. Remanufacturing was also seen as an overall sustainable and cost-effective approach, even though most respondents conveyed willingness to pay an amount equal to a product which is newly manufactured.

Some respondents with more knowledge of the concept, reaffirmed the benefits of remanufacturing and pledged it to be useful not only to the manufacturing industries but also IT and private sectors in the form of CapEx to OpEx conversion. It was said to improve that it contributed to the sustainable development of the company and nation as a whole.

With the second set of respondents, the awareness on the concept of remanufacturing was not of a substantial level. After the basics were briefed, respondents showed understanding of its role in improving overall sustainability but were not convinced about the availability of remanufactured products. They reported to look for factors relating to comfort, durability, usability, cost and brand when making a purchase decision. Therefore, if awareness about remanufactured products was increased through better marketing practices, the market size would be enhanced.

5.0 CONCLUSIONS:

The conclusions drawn from literature review and depth interview are given below

5.1 LITERATURE REVIEW

By providing accurate information about their benefits, specifications, and warranty, consumers may feel more confident about the quality of remanufactured products and be less likely to have negative perceptions about them

This research highlights that social influence is a significant factor in consumers' purchasing intentions, as they are more likely to buy remanufactured products if they receive approval from those who have significant impact on them

study found that both personal benefits (PBN) and Green Awareness (GA) can have a positive impact on the attitude (AT) towards remanufactured products

5.2 DEPTH INTERVIEWS

Respondents opined that awareness among consumers regarding remanufactured products need to improve to a greater extent.

Respondents shared that in each product mostly, there would be atleast a few parts which are remanufactured.

Major factors affecting the purchase decision of remanufactured goods mainly include certifications, warranties and brand.

Cost effectiveness is not seen as a major factor influencing purchase decision.

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RESEARCH

STUDY ON VENDOR AWARENESS OF HYGIENE AND SANITATION PRACTICES IN STREET FOOD VENDING IN THE CITY OF AHMEDABAD, GUJARAT, INDIA

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ABSTRACT

Street food is a crucial and integral part of our society. Vendors cook and sell street foods, often in the streets, as ready-to-eat meals creating employment for the marginal people in developing countries. It is now one of the go-to options for urban people within their hectic schedules due to its easy access, wide variety and low cost. However, the food often needs better hygiene and risks food safety due to improper handling, preparation, storage, vending and waste disposal. The present study on a hundred street food vendors selected from major food clusters of Ahmedabad city, India, was conducted to determine the knowledge of vendors about food safety standards, hygiene and sanitary practices after introducing the Food Safety & Standard Act, 2011. The study collected data through face-to-face interviews using structured questionnaires on demographics, food safety and legislation knowledge. The method also included an extensive observation checklist on personal hygiene, food handling and waste management practices, along with conditions of the vending environment. Information from the study showed that most vendors had at least primary education. Still, only 5% of vendors got formal training, and the rest learned either from a friend, a family member or on their own in a non-formal setup.

Moreover, 70% of vendors were unaware of or did not avail of various food quality licenses. Regarding hygiene, 75% of vendors didn't wear aprons, gloves and head covers, and only 13% washed their hands before all the tasks. Around 45% of vendors cleaned vessels and cooking surfaces regularly, and only 8% had water available around them through pipelines. Almost 50% of vendors displayed food in open areas, either in vessels or in and around the working surface area. These results indicate that street vendors' have a moderate understanding of food handling practices, poor knowledge of environmental sanitation and waste handling practices, and need more awareness of safety measures and hygiene. Like developed countries, the food safety standards in India are in order. Still, its implementation shows a significant gap between

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knowledge and practice by street-food vendors leading to compromise in food safety. Hence, vendors should be required to undergo training in hygiene and sanitation before opening a food vending business. They should also be provided with continuous food safety education to help them achieve higher standards on the hygiene of their products. Moreover, giving basic infrastructures like accessible potable water, waste management utilities, and small financial assistance to upgrade vending carts per new standardized cart specifications will improve hygiene practices. Establishing a code of practice for the street food industry, like "Clean street food hubs," can further assist in acknowledging street vendors' requirements and learning from consumer expectations, thereby increasing street vendors' understanding of food safety standards.

Keywords: *Sanitation awareness, hygiene standards, Street food vendors, food safety education.*

INTRODUCTION

Street food represents diversity in the culture of India. Street food is a ready-to-eat meal for immediate or later consumption without further preparation or processing, prepared or sold by street vendors (Imathiu, 2017). Street food is famous for its distinctive flavor, presentation, eating experience, and affordability. Today's majority of the urban population is inclined to consume street food because of its ease of access and convenience.

Due to low investment and essential skill set, millions of individuals take employment in street food vending. Moreover, as the urban population increases, so does the demand for street food leading to more people entering the street vending business. Furthermore, street food vending businesses contribute significantly to the country's economy and preserve society's cultural and social heritage (Hill *et al.*, 2019). In addition, street food often reflects local culinary traditions and is critical in enhancing local tourism. According to (Fellows *et al.*, 2011, p.2), Street food vendors in India are around 3 million who operate on pavements or the roadside in busy places with a temporary setup like a push cart or a mobile stall.

Until recently, food safety and handling challenges were not in focus, but recent situations like Covid-19 have made it into one of the crucial factors considering public health. The street food vendor is the most critical stakeholder in the street food production and storage chain (WHO, 1989). They often prepare food at home or on-site, where vendors have limited access to basic sanitary facilities. Vendors continue to use outdated techniques for processing and packaging food, store it at improper temperatures, and ignore their hygiene, compromising the safety of the food they sell (Gadi *et al.*, 2013).

Street food vendors' ignorance of safe food handling, the environment on and surrounding vending carts, sanitation and hygiene practices, food storage and display methods, potable water usage, and other relevant issues is a significant factor in these observations (Khairuzzaman *et al.*, 2014, p.1). Moreover, poor local infrastructure, lack of sanitation facilities, lack of proper communication of food safety compliances and regular training, among others, are other primary reasons for low food safety standards. FSSAI, established under the Food Safety and Standards Act of 2006, has laid down multiple guidelines for improving food safety, but its complete implementation still needs to be achieved (FSSAI, reg., 2011). The Food Safety and Standards Regulation 2011, notified under the FSSA,2006, has criteria on licensing and registration of the vendors, including guidelines on sanitary and hygiene practices to ensure the safety of street vended food. The Food Safety and Quality (FSQ) programme of the CII Institute of Quality brings awareness among street food vendors about adopting excellent hygiene standards through its easy, informative checklist of hygienic practices, known as the "CII-14-point checklist on food safety for street vended food." (Rane, 2011).

Because of the growth in the sector, the government's attention is on strengthening the implementation of the guidelines and standards through training, capacity building and hygiene awareness programs and reducing the gap between policies and their performance (Choudhury *et al.*, 2011).

This study contributes to identifying the status of awareness and execution of various food handling practices by street food vendors in different parts of the city of Ahmedabad. The research was conducted as a case study, including information gathered via interviews with street food vendors. The study is limited to Ahmedabad and focuses on famous street food hubs of the city. The study provides the necessary information to understand the scope of improving street food safety, thereby preventing public health risks.

METHODOLOGY

The present study was conducted in Ahmedabad, Gujarat, India. Ahmedabad city is known for its street food offering and has multiple street food clusters popularly known as 'khau galis'. Ten khau galis (street food lanes) were chosen in Ahmedabad's West Zone, South Zone, North West Zone and Central Zone for the study. The locations were Manek Chowk, Vastrapur Lake, CEPT & HL Lane, SG Highway (Opp. Rajpath Club), Sindhu Bhavan Road, Opp. Gujarat College, Kankaria Lake, Municipal Market, and Bhatiyar Gali. The selected locations intend to accommodate many consumers, including students, workers, residents, and office-goers. The clusters identified were near colleges, offices and busy public places. A study was conducted from July 2021 to October 2021 of 100 mobile street food vendors. A structured interview and an observation checklist are used to get information on hygiene and sanitation practices by street food vendors. Along with demographic data, information was gathered about training sources, personal hygiene, the environment around the cart, and hygiene practices during food preparation, storage, and selling.

RESULTS

The outcome is divided into two sections. Observation findings indicate a vendor's food handling practices, whereas Survey results include survey-related data.

OBSERVATION RESULTS

Figure 1: Cutlery and additional material storage

Figure 2: Water storage and vessel condition

Figure 3: Handling of momos steamer

Figure 4:Usage of bucket as dustbin

The cutlery and additional raw vegetable storage compartment is shown in the Figure shows that the place is dirty and unhygienic. Figure 2 shows the steel water tank's position and distance from the cooking equipment. It is visible that water is handled using a steel glass with bare hands. The study claims that the vendor uses the same vessel to cook multiple meals without washing the vessel and only cleans it at the end of the day next to the road. The Momos steamer, seen in Figure 3, is maintained open on the cart's rooftop and accessed by bare hands. As seen in Figure 4, a bucket is used as a garbage bin. The vendor does not use the government-provided garbage bin. In addition, there were flies everywhere around the open garbage bin.

Figure 5 shows the vendor does not follow basic hygiene practices. As seen, he does not wash his hands before preparing a new meal and doesn't use gloves for cooking or wears a cap; instead, he accesses the raw material with his bare hands.

Figure 6: Hygiene practice after serving of food

Figure 6 demonstrates how the vendor cleans his equipment and the preparation space. According to the study, the vendor uses the same cloth to wipe down the table after each meal, washing it only once they return home. After disposing of used plates and cutlery, the vendor also uses the same cloth to clean his hands. While cleaning, it was observed that little preparation leftovers were dumped on the ground.

SURVEY RESULTS

In the study, 98% of vendors were male. 36% of vendors are local, and the rest have migrated from various locations from the country. 71% of the vendors have stayed more than five years in Ahmedabad, and more than 65% have more than five years of experience, with 93% practicing it full-time. Around 60% of vendors have pushcarts, and the remaining use stand-alone structures.

Around 87% of the vendors are less than 45 years of age. 90% of vendors do work continuously. Although 95% of vendors have had at least primary education, only 5% have taken formal training, and the rest have either learnt independently or from a friend or family member. In addition, 76% of vendors sell freshly cooked food.

76% of vendors had considered ease of maintaining Hygiene as an essential factor while choosing an existing cart, and 77% are more than moderately satisfied with the ease of maintaining Hygiene at the existing cart. 80% of vendors are at least moderately comfortable cleaning the cart, while 71% are at least relatively comfortable cleaning utensils at the cart.

72% of vendors had considered water storage facilities as an essential factor while choosing an existing cart, and 55% are more than moderately satisfied with water storage facilities at the cart. Around 60% of vendors store drinking and potable water in plastic containers.

84% of vendors are at least moderately comfortable with storing utensils on the cart, and 78% are at least moderately comfortable with storing raw materials on the cart. 71% and 74% of vendors are at least moderately comfortable with storing perishable items and storing chopped vegetables on the cart, respectively. 56% of vendors store pre-cooked food supplies in stainless steel containers in ambient conditions. 75% of vendors store raw food in stainless steel or plastic containers in ambient conditions. Almost 50% of vendors display food in open areas in vessels or around the working surface area.

72% of vendors are willing to update weather protection on their carts.

Almost 80% of the vendors understand the word hygiene, but 75% don't wear aprons, gloves and head covers, and only 13% wash their hands before all the tasks. 25% of vendors always wash their hands after waste disposal. 20% of the vendors take baths less than occasionally. Only 14% of vendors cut their nails regularly. 35% of vendors smoke near the cart. Though, 69% of the vendors try to take precautions while coughing.

45% of vendors wash raw food materials before cooking a meal. 48% of vendors clean vessels before every meal, while 45% clean tools every time before cooking a meal. 38% of vendors clean the work surface before and after cooking a meal, but only 24% always keep their surroundings clean. 72% of the vendors do not follow government food packaging guidelines. Only 19% of vendors wash steel plates and spoons with soap.

73% of the vendors understand the word Sanitation, but only 50% are aware of Government policies on Hygiene and Sanitation. 70% of vendors are unaware of or have not availed of food safety-related licenses. 65% of vendors know of hawking licenses, but only 35% have availed.

82% of vendors considered garbage disposal facilities an essential factor while choosing an existing cart, and 73% of vendors are more than moderately satisfied with garbage disposal facilities at the cart. However, only 51% of vendors use bins provided by corporations, which also spill over in most situations at the end of the day. In addition, 32% of vendors do not use Municipality bins for disposing of garbage.

61% of vendors are willing to update their dumbing leftovers facility on the cart. 56% of vendors are willing to update the availability of Drinking water facilities on their cart. 58% of vendors are willing to update the availability of Potable water facilities on their cart. Only 8% of vendors have water available around them through pipelines.

60% of the vendor's carts are made from Wood & metal, which are not suitable materials for building a hygienic solution. In addition, 70% of the vendors sell on the roadside.

Over 70% of the vendors sell at least 50 plates daily, costing at least 50 rs. and above, making vendors fall into the low-income group of the country.

Table 1: Distribution of sample by performance of various 'Preparation activities by Vendor/Helper' on the cart

	Work done by Vendor	Work done by Vendor & Helper/other	Work done by Vendor & Helper/other	Total
Chopping Vegetables	62	18	19	100
Cleaning V egetables	63	16	20	100
Restocking	67	17	15	100
Assembling the Cart	65	12	22	100
Cleaning the Cart	61	18	20	100
Cleaning of Utensils	58	29	13	100
Packing of Parcel	64	16	19	100
Filling of Water	64	20	15	100
Garbage Disposal	61	27	12	100
Setting up the Fuel Pipe	72	12	15	100
Setting up of Illumination	68	14	17	100
Preparation of Pre-Cooked Materials	72	9	18	100
Preparation of Pre-Cooked Items	71	9	19	100
Transportation of Pre-Cooked Items	68	6	26	100

Table 2: Distribution of sample by performance of various 'Storage activities by Vendor/Helper' on the cart

	Work done by Vendor	Work done by Vendor & Helper/other	Work done by Vendor & Helper/other	Total
Storage of Utensils	66	17	16	100
Storage of Raw Materials	66	17	16	100
Storage of Perishable Items	65	19	15	100
Chopping & Storing of Vegetables	62	18	19	100
Refilling Supplies	61	21	17	100
Restocking of Fuel /Batteries	68	17	14	100

Table 3: Distribution of sample by performance of various 'Service activities by Vendor/Helper' on the cart

	Work done by Vendor	Work done by Vendor & Helper/other	Work done by Vendor & Helper/other	Total
Taking Orders	79	9	12	100
Assembling the Food	66	15	18	100
Serving of Food	65	20	14	100
Cleaning of Tables	63	27	10	100
Offering Water	64	27	9	100
Getting the Bills	68	18	13	100
Collection of Cash	79	9	12	100

57% of vendors have at least one helper. The above table demonstrates that vendors perform 70% of the tasks, and there is no clear division of work responsibility.

Overall, most vendors want better facilities that knowingly or unknowingly lead to better food safety, hygiene practices and environmental facilities. Even though vendors were aware of hygiene practices, food safety regulations, and better carts and facilities, due to budget constraints and sometimes lack of options in availability, vendors opted for existing solutions.

DISCUSSION

Street food safety hazards are one of the biggest public health concerns globally (Vasanthi and Bhat 2018). One of the leading food safety hazards is vendors' hygiene, their knowledge of hygiene and sanitation practices, and legal certification. As most street food vendors have spent a reasonable time in the business, they are aware of such practices but still need to adopt them entirely (Gamieldien and Van Niekerk, 2017). The challenges are often low selling price points, same vendor vending and handling money, substandard vending carts, lack of infrastructure and the temporary and mobilenature of the business (Sudershan *et al.*, 2008).

India has food safety acts to regulate and maintain food safety standards to reduce such risks. Although the situation has improved recently, low-income street vendors still have standard food safety practices. In India, through organizations like the National Alliance of Street Vendors of India (NASVI), self-regulation is promoted, but it needs to determine its effectiveness. The Government's FSSAI aims to ensure food safety and hygiene, but its implementation still needs to be applied at a mass level. Hence, a collaboration between both NASVI & FSSAI could help reduce the gap between regulations and their implementation. In addition, the Government should focus more on recognizing street foods, developing and implementing guidelines on food vending practices, better surveillance methods, and encouraging healthier street food options (Reddy *et al.*, 2020).

CONCLUSION

Most of the studied Street food vendors have at least primary education, but only a few had formal training on food hygiene, leading to alack of understanding of the importance of food safety. Issues in food handling are that vendors use bare hands to handle food, utensils and money simultaneously without washing hands. They store and preserve food at ambient temperatures. They do not follow any personal hygiene routine. These results are consistent with the conclusion found in (Johnson *et al.*, 2020). The vending carts are also not built as per guidelines and are substandard. The vending environment does not offer basic infrastructure suitable for safe food vending practices.

Solutions to the above challenges will improve food safety and quality and equip people looking to venture into such a high employment opportunity market. Moreover, continuous training programs, enforcement of government policies regarding food handling practices, continuous monitoring, and simple informative checklists of hygiene standards will ensure food safety. Furthermore, vending carts with basic amenities developed and registered based on government guidelines should be offered at subsidized rates or in easy installments.

Overall, a clean and hygiene-looking cart and better vendor hygiene practices will boost vendor confidence, attract more consumers, and ensure food safety and consumer patronage.

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RESEARCH

MODERN TOOLS AND TECHNOLOGY TO ENHANCE EMPLOYABILITY OF UNDERGRADUATES IN INDIA

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ABSTRACT

Employability is the ability to find and maintain employment, and students often prioritize developing their employability skills to increase their chances of securing a job after graduation. However, despite taking steps to enhance their employability, challenges such as a highly competitive job market, limited job opportunities in their chosen field, and a lack of experience or relevant skills can still hinder a student's ability to secure employment. Hence, addressing these challenges requires a thorough understanding of the existing initiatives taken by stakeholders, as well as identifying the gaps in those initiatives. A suggested plan of action highlighting the challenges and solutions to those challenges can help bridge these gaps and provide a solid solution. Implementation methods such as Personalised Learning, Skill Matching, Decentralised Learning, Automated Record Keeping, Micro-credentials, and Verifiable Credentials can better prepare students for the job market. A coordinated effort among stakeholders, including educators, employers, and government agencies, can help ensure the success of these initiatives while keeping in mind the exciting future field of study involving the Brain-Computer Interface.

Keywords: employability, AI, blockchain, personalized learning, skill matching, SDP, NEP

INTRODUCTION TO EMPLOYABILITY

What is employability? Various people have used different versions of this term, but the most important one of the lot is the employers' take on this term. Gunhild M. Lundberg et.al [1], use the term employability as: "a set of achievements, skills, understandings and personal attributes, that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy".

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Human capital theory suggests that investments in education, training and other forms of human capital development can improve an individual's productivity and earning potential. Governments worldwide have recognised the importance of human capital in promoting economic growth and have implemented policies and programs to improve the employability of their citizens. This includes investing in education, training programs, and other forms of human capital development, as well as creating an environment conducive to human capital growth. By investing in their citizens' human capital, governments hope to increase the productivity and competitiveness of their economies in a globalized society.

Higher Education Institutions (HEIs) can play an important role in helping students to develop employability skills and attributes. Through the curriculum and learning experiences they offer, HEIs can help students to develop a range of skills and attributes that are important for success in the job market. These might include cognitive skills such as problem-solving, critical thinking, and communication skills; social skills such as teamwork, leadership, and the ability to work with people from diverse backgrounds; and practical skills like time management and the ability to apply knowledge to real-world situations.

In addition to helping students develop these skills and attributes, HEIs can also help students to develop presentation skills, which are important when seeking jobs or internships. This might include helping students to build their resumes, cover letters, and interview skills. Finally, HEIs can also encourage a love of learning and a willingness and awareness of the need to continue learning throughout one's career. This might include providing opportunities for students to participate in experiential learning, internships, and other forms of hands-on learning, as well as motivating students to engage in ongoing professional development and lifelong learning [2]. However, it is also important for students to engage in activities outside of the HEI in order to increase their employability. This can include gaining experience by participating in extracurricular activities like working at an NGO or volunteering for a plantation drive to raise awareness about several societal issues through street play or marches. This will help to develop career plan, and take advantage of quality employability experiences that are integral to and explicit in their program of study by considering inclusivity in every activity. By taking an active role in their own career development, students can increase their employability and improve their prospects for success in the job market.

It is important to recognize that simply having work experience or completing a particular curriculum does not necessarily guarantee employability. Employability is a multifaceted characteristic that depends on an individual's ability to demonstrate a set of achievements that demonstrate competencies required for a job/career specific to a given job or career. These achievements can be cognitive, social, practical, or other skills that are relevant to the job in question. It is also important to recognize that employability is context-dependent and may vary depending on the specific job or career an individual is pursuing.

Simply having a broad set of skills and achievements may not be sufficient for success in certain situations. Therefore, individuals have to focus on developing a range of skills and achievements that are relevant to the jobs and careers they are interested in pursuing and to continually assess and adapt their skills and achievements to the changing needs of the job market by upskilling [3].

Looking at India's Engineering undergraduate employability situation, Mr Narayan Murthy, founder of Infosys, commented on the flaws of the country's learning system. He said, "Engineering colleges in India are churning out only 25 per cent quality engineers and nearly 80-85 per cent of youngsters are not suitably trained for any job." Aspiring Minds is a company that administers a computer-based test called the AMCAT (Aspiring Minds Computer Adaptive Test) to assess the employability of technical graduates in India. The AMCAT measures a range of skills, including business communication, English language proficiency, logical and numerical skills, analytical and problem-solving skills, and coding skills. According to the results of the AMCAT test, only a small percentage of engineering graduates in India are considered to be employable in the knowledge economy. Specifically, the test results show that 47% of graduates cannot be employed in any domain or sector, 17.91% are employable in software services, 3.67% are employable in software products, and 40.57% are employable in business process outsourcing (BPO) sector. Only 3.84% of graduates are considered to be start-up ready, and 6.56% are considered to be "designed job ready" for other core engineering jobs. These figures suggest that there is a significant gap between the skills and knowledge of engineering graduates in India and the needs of the job market. [4]

It is projected that the Asia-Pacific region will be a major economic growth area in the coming decades, with many countries in the region expected to become economic superstars. This is likely to create a large demand for skilled workers, including graduates from India, both within the region and internationally. In order to meet this demand and prepare students for success in this changing job market, it will be important for the education system in India to reorient itself and focus on providing students with the skills and knowledge that are in demand. This may involve aligning the curriculum more closely with the needs of the job market, and increasing the focus on vocational and technical education. By taking these steps, the HEIs in India can better prepare students for success in the 21st-century global economy [5].

INITIATIVES TAKEN BY STAKEHOLDERS TO ADDRESS THE CHALLENGES

National Educational Policy 2020 [6] is a comprehensive policy that aims to overhaul the education system in India and bring it in line with international standards. It has indeed been a significant development for the Indian education system, with the goal of improving the quality and relevance of education in the country.

As we move into the fourth phase of the industrial revolution, it is increasingly important for students to have domain expertise and digital literacy in order to be competitive in the job market. Inclusion of cross-sectional course selection by offering cross-sectional course selection and vocational training, the education system can help students enhance their core skills and prepare for success in their chosen careers.

Vocational training in the education system is an important step towards making education more relevant to the job market's needs and helping students develop the skills that are in demand as these programs can provide them with the specialised training they need to succeed in these fields.

Adopting a structure similar to that of other developed countries and allowing foreign universities to set up campuses and operate in India to focus on developing the competencies of students to adapt to cross-functional, cross-cultural, cross-economic, and cross-professional demands are expected to bring many benefits to students in the country. By providing students with access to high-quality education from international institutions, the policy aims to improve the overall standards of education in India and make it more competitive on the global stage.

Additionally, studying at a foreign university or having international exposure can broaden students' horizons and provide them with valuable intercultural skills that are highly sought after in today's globalized world.

There is a huge need to reduce the talent-skill gap in India. If it is not addressed, it may lead to a negative impact on the employability of graduates and the overall competitiveness of the economy. According to the International Labour Organization, there is expected to be a skill deficit of 29 million by 2030, which could significantly impact the country's GDP. The main cause of this gap is the inadequacies in the education system due to the various challenges prevalent.

Focusing on providing students with industry-relevant skills and by improving the quality of education by making it more relevant to the needs of the job market by shifting the focus from rote learning to practical skills development by encouraging and equipping students to develop a range of practical skills with the required technical and soft skills that also impart leadership skills resulting in upskilling.

Leadership skills involve the ability to inspire and motivate others, as well as the ability to make difficult decisions and solve problems effectively. These skills are valuable in a wide range of fields and can help students stand out in the job market. There are many ways that students can develop leadership skills, including participating in extracurricular activities, volunteering, and taking on leadership roles in school or college by taking responsibilities. By encouraging students to develop these skills and providing them with opportunities to practice them, the education system can help prepare them for success in their future careers as it's an important aspect of education and can have a significant impact on a person's career trajectory.

Self-awareness and reflection are important components in understanding one's own passions, capabilities, and career aspirations. It's important for students to understand the set of skills, knowledge, personal qualities, and worldview that they bring to their higher education and career path as it allows them to align their goals with the industry standards and expectations. Self-awareness also allows students to identify and articulate their strengths and weaknesses, which is important in developing a resume and in job interviews.

Self-concept awareness can be developed through various activities such as reflection on personal and professional experiences, engaging in simulations and real-world projects, and participating in educational programs that encourage self-exploration and self-evaluation. A regular and honest evaluation of oneself through close observation of one's behaviour, attitude and performance in various activities can help individuals discover their life motives, personal vision, aspiration levels, self-image, and inherent traits. To have self-assessment periodically, SOAR is a framework that is based on the Appreciative Inquiry method, which is a positive and strengths-based approach to organizational change. The acronym stands for Strengths, Opportunities, Aspirations, and Results. This self-evaluation can help students develop a clear picture of where they are and where they want to be, which can help them make better-informed decisions on their career path.

According to the study conducted by Dwarakanath et.al, the results can help address industry readiness issues. They have also mentioned that personal competencies are essential for superior job performance. It was revealed by interviewing a sample of graduating students in one engineering college that over 70% of them required an awareness programme on personal competency.

The common competencies identified by them included reading, writing, articulation, analysis, report writing, group discussion, critical thinking, and discernment. These skills are important for students to be able to communicate effectively and think critically, which are highly valued by employers. By helping students to develop their personal competencies, they will be better equipped to articulate and demonstrate the skills and knowledge they bring to the job market. This can help them to stand out in a crowded job market and increase their perceived value to potential employers.

Student Development Programmes (SDPs) for enhancing employability has been a topic of interest for several decades, as the expectations of employers and the skills required by the job market are constantly evolving. In order to meet these changing expectations, SDPs must take into account the differences between the campus and corporate environments and prepare students for the transition. It is important that students are trained in self-learning and teamwork, as they will often be required to work independently and as part of a team in the workplace. Group projects and assignments can be useful for developing teamwork skills, and it is also important to provide students with feedback on their interpersonal skills to help them develop their self-awareness and emotional balance.

In addition, students should be empowered with the necessary skills and tools to be able to self-regulate their emotions, which is an important aspect of professional development.

The HEI's vision should be to empower students, enable enriching relationships and facilitate growth. This could involve providing them with training in stress management, time management, and other necessary capability-building exercises.

This emphasis on employability and skills development is likely to help reduce the social stigma associated with vocational careers and provide students with more promising career opportunities. By aligning education and the holistic approach to Student-Centric SDP with the needs of the economy, the policy aims to help bridge the talent-skill gap and make graduates more employable.

Overall, the implementation of the National Educational Policy with Student-Centric SDP will be a significant step towards modernizing and improving the education system in India and meeting the 2030 Agenda for Sustainable Development by ensuring that all people have access to inclusive, equitable, and lifelong learning opportunities.

ENHANCING EMPLOYABILITY THROUGH MODERN TOOLS AND TECHNIQUES

Various modern tools and techniques that can enhance employability upon implementation, in an organization are discussed below:

Blockchain technology is a decentralized and distributed digital ledger that is used to record transactions across many computers in such a way that the recorded information cannot be altered retroactively without the alteration of all subsequent blocks and the consensus of the network.

Blockchain technology can be useful in education in a few ways. It can help to securely store and verify digital credentials, such as diplomas or certificates, making it harder for fraudsters to fake them. It can also help create transparent student records that are tamper-proof and easily verifiable by providing a decentralized and secure system for storing and sharing academic records. Each academic record can be assigned a unique digital identity, or hash, which is then added to the blockchain. Once added, the record cannot be modified or deleted without the consensus of the entire network. Providing training on the following modules will better equip individuals for future jobs.

The integration of emerging technologies such as blockchain, artificial intelligence (AI), and data analysis (DA) can help to improve the implementation of the New Education Policy (NEP) with Student-Centric Self-Directed Learning (SDP) in several ways:

PERSONALIZED LEARNING

Personalized learning, also known as customized or individualized learning, is an approach to education that tailors instruction to meet the unique needs and interests of each student by providing the student with access to online resources and tools that allow them to learn at their own pace and on their own schedule.

AI-powered blockchain-based systems could be used to create personalized learning experiences for students by analyzing student data. This could involve using machine learning algorithms to analyze student data,such as their learning style, progress, and interests, and then adapting the curriculum and teaching methods accordingly to create personalized learning plans that cater to individual needs.

Hence if there’s a facility for the students to explore where their interests lie and once they have realized it, they will be highly interested and engaged in the course and are more likely to be motivated to spend more time on the course. They are more likely to be self-motivated to set their own goals for completing the course and to be more resilient in the face of challenges. A 3 survey conducted by the Higher Education Research Institute at UCLA found that over half of college students reported feeling bored in class, and more than a third felt that their classes did not challenge them or spark their interest.

This lack of engagement can lead to disinterest in coursework, poor grades, and lower retention rates. Therefore they may not see the relevance of the course to their future goals or interests.(Personalized learning for a mechanical undergraduate student keeping in mind the guidelines set by the national educational policy and student development programme for the student's area of interest.)

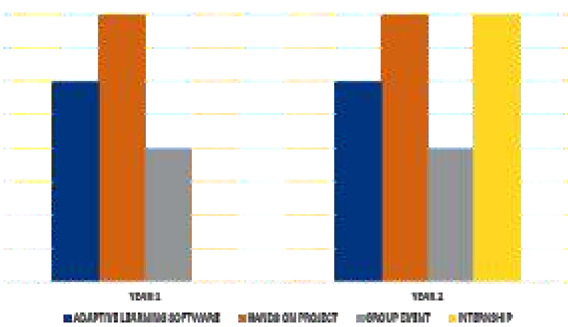

Figure 1: Proposed Personalised Learning

One way to implement personalized learning for a mechanical engineering undergraduate can be achieved through a variety of methods, such as adaptive learning software (A type of educational technology that uses data-driven algorithms and artificial intelligence (AI) to personalize the learning experience for individual students).

This software is designed to adjust the difficulty level, pace, and content of the learning material in real-time based on the student's responses and progress), a variety of hands-on project-based learning, and small-group instruction post gaining the basic knowledge and skills in Year 1 and more advanced knowledge and skills in Year 2 as depicted in figure 1.

This can include design challenges and internships that allow the student to apply what they have learned in the classroom to real-world situations and explore their specific area of interest in greater depth before Year 3.

SKILL MATCHING

AI and blockchain can be integrated to create a system that matches students with jobs based on their skills, performances, qualifications and personal preferences. Once students clear Year 1, their respective departments can conduct an assessment using Bloom's Taxonomy (Framework often used in education to classify educational goals and objectives into different levels of complexity and specificity) following decentralized learning that helps students to discover their topic or field of interest after gaining the required knowledge, and skills and implementing it. Educators with the help of Artificial Intelligence can create assessments that align with specific learning objectives and measure student progress towards those objectives. This process will help the educators and the students to know how the student is applying the knowledge and skills gained in that particular subject area thereby paving a path to personalized learning where the continuous feedback of decentralized learning, skill matching and personalized learning is maintained to propel the student deeper to realize their interests.

Augmented analytics is an approach to data analysis that utilizes machine learning algorithms and artificial intelligence (AI) techniques to automate and augment human intelligence and decision-making. It involves the use of natural language processing (NLP), machine learning, and other AI techniques to automate data preparation, insight generation, and decision-making processes to help users gain insights and identify patterns in large, complex data sets that might otherwise be difficult or impossible to discover using traditional analytics methods.

Therefore, it can be used to predict which students are most likely to be successful in a particular career, and which skills will be needed to succeed in those careers and provide them with the resources and support they need to achieve their goals. This would greatly improve the employability of the students as they would have job opportunities which they are best suited for.

DECENTRALIZED LEARNING

Blockchain technology could be used to create decentralized learning platforms which allow for the creation of a transparent, immutable, and decentralized ledger of transactions. This ledger can be used to record educational credentials, such as diplomas, certifications, and transcripts, in a way that is secure and tamper-proof.

This form of learning allows students to access educational resources, such as online courses and materials, without the need for a centralized authority. Implementing blockchain with decentralized learning would involve creating a secure and decentralized platform for delivering educational content and verifying student progress.

Here are some steps that can be taken to implement blockchain with decentralized learning:

Creation of a blockchain-based platform: A decentralized learning platform can be created using blockchain technology to store educational content and records, and facilitate interactions between educators and learners.

Storing educational content and records on a blockchain can provide a secure and transparent way to record and share educational data. Interactions between educators can be facilitated using smart contracts (Smart contracts are self-executing digital contracts that automatically enforce the terms of an agreement between two or more parties. They are powered by blockchain technology, which provides a secure and transparent way to record and verify transactions) and decentralized applications (dApps). For example, a blockchain-based platform like TeachMePlease can be used to store and share educational content and records, while smart contracts can be used to facilitate payments between educators and students.

VERIFICATION OF STUDENT PROGRESS

Blockchain technology can be used to verify student progress and completion of educational courses. Each student's progress can be recorded on the blockchain, and this information can be accessed by authorized parties.

DEVELOPMENT OF SMART CONTRACTS

Smart contracts can be used to automate the process of verifying student progress and completion of courses. Once a student completes a course, the smart contract can automatically issue a digital credential or badge, which can be stored on the blockchain.

COLLABORATION OF EDUCATIONAL INSTITUTIONS UNDER AICTE/UGC

Collaboration of educational institutions can help to establish standards for digital credentials and facilitate the recognition of these credentials by employers and other educational institutions.

AI algorithms could then be used to personalize the learning experience and provide feedback and support.

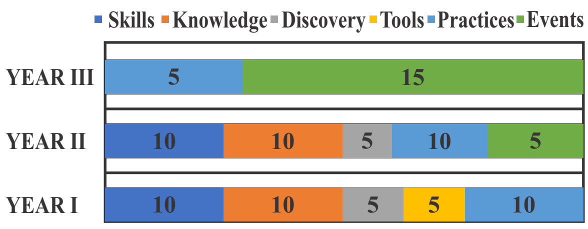

Figure 2: Holistic SDP Schedule [7]

Dwarakanath et.al [7] suggested an SDP model to enhance employability which is shown in figure 2.

According to Rodgers (1990), student development refers to the process in which a student advances, improves, or enhances their developmental abilities due to enrollment in a higher education institution. The goal of student development theory is to acknowledge the cultural aspect of learning, which involves various contexts such as social, emotional, motivational, cognitive, developmental, biological, and temporal factors. This theory is designed to promote the comprehensive development of individuals as a whole, as stated by the National Academies of Science (2018) and Walker (2008). [8]

As per the suggested SDP above, decentralized learning can be introduced as per the NEP guidelines. The selection of courses in Year 1 can be mandated but the courses can be selected by students according to their interests from the pool of courses created by different colleges. This ensures that the students can access content from the colleges which would not be possible otherwise.

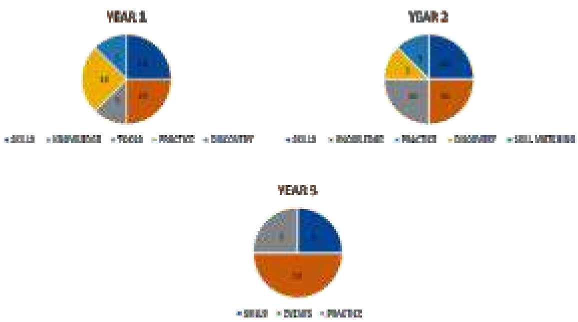

Figure 3: Suggested SDP Model for Enhancing Employability

As indicated in figure 3, Year 1: 10 hours of skills and 10 hours of knowledge can be imparted through decentralized learning, whereas 10 hours of practice can be achieved by combining the previous two developments. 5 hours that are allotted for the discovery of the relevant skill according to an individual's liking can be obtained by exploring different modules available. This ensures that the students can have a brief idea of the things that they like or think they like before the next step of skill matching and personalisation happens. Usually, first-year students will be enthusiastic to explore new opportunities hence this method can be used to make the fundamentals strong. Identifying patterns in student behaviour, such as attendance, engagement, performance, and participation in activities (co-curricular and extra-curricular) can help to identify student needs and address them in a timely manner using augmented analytics.

Year 2: When the students complete year 1 of their undergraduate studies, they enter into their respective disciplines of Engineering to learn about core courses. Skill matching can help them realise where their interests lie with respect to their field of study and hence they can better plan with the help of Professors' guidance to build a stronger foundation. 5 hours of discovery can be used further to narrow their interest to a particular topic in their vast core concepts ensuring that they will have a better understanding of themselves, their strengths, and their interests before starting Year 3. Augmented analytics can be used to track student progress and identify areas for improvement so that students can be directed to resources that will best help them succeed. This form of learning can help the students to build a strong structured foundation.

Year 3: Students can attend relevant events hosted by industry personnel as per their narrowed field of interest facilitated by the college and also on their own. Augmented analytics can also be used to analyze data on student performance and preferences to inform the development of curriculum and programs that align with industry needs and standards providing educators and administrators with data-driven insights that can inform decision-making and improve student outcomes.

AUTOMATED RECORD KEEPING

The development of blockchain technology in educational institutions should be a collaborative effort between educational institutions, technology companies, and other stakeholders. The storage of data on the blockchain should be managed by a trusted third-party or a consortium of institutions to ensure security and reliability. The access to and benefit of blockchain technology should be available to all stakeholders, including students, educators, administrators, and employers, to improve the transparency, security, and efficiency of the educational system. Blockchain technology can be used to create tamper-proof, decentralized records of student data, such as grades, attendance, and progress.

Implementing blockchain with automated recordkeeping involves creating a secure and decentralized system for storing and sharing records, while also automating creating and updating of these records.

Here are some steps that can be taken to implement blockchain with automated record-keeping:

Creation of a blockchain-based platform: A blockchain-based platform can be developed to store records and facilitate automated record keeping. This platform can be accessible to authorized parties such as employees or regulators.

Creation of digital identities: Each record can be assigned a unique digital identity or hash, which is then added to the blockchain. This will provide a high degree of security and transparency, as the records cannot be altered or deleted without the consensus of the entire network.

Integration of smart contracts: Smart contracts can be used to automate the process of creating and updating records. Once a certain condition is met, such as a certain date or completion of a task, the smart contract can automatically update the record and store the new version on the blockchain.

Collaboration with stakeholders: Collaboration with stakeholders such as regulatory bodies, companies, or industry groups can help to establish standards for automated record keeping and ensure that the system complies with relevant laws and regulations.

Training and adoption: Training programs can be developed to educate employees and stakeholders on how to use the new system, and encourage adoption of the new technology.

AI algorithms could then be used to analyze this data in order to identify patterns and trends and to provide feedback to both students and teachers.

MICRO-CREDENTIALS

Micro-credentials, also known as digital badges (certificate courses such as Cybersecurity and Applied Systems Engineering or Introduction to Microsoft Excel), are a form of verifiable credentials that focus on specific skills or competencies, rather than a full degree or certification. They are often issued by educational institutions, professional associations, or industry experts to recognize the acquisition of a specific skill or knowledge hence upon completion of an online course to gather knowledge and apply it through a tool (develop skills), these badges can be given to motivate the students. Blockchain can be used to create and manage Micro-credentials, which allow students to earn credit for completing smaller, more specialized training programs or specific learning activities.

This can be done by skill matching, where the student's current skills and interests are matched with appropriate coursework or training programs in Year 2 based on what interests the student during the discovery phase. Attending events or workshops conducted by industry personnel can also provide students with valuable opportunities to learn from experts in their field and gain real-world experience in Year 3 when the students dive deep into the narrow section of their interest field of study in their chosen undergraduate degree program. These events can include networking events and exhibitions. These micro-credentials can be used to demonstrate student proficiency in specific skills, making it easier for employers to identify potential candidates.

VERIFIABLE CREDENTIALS:

AI-powered blockchain systems could be used to create digital credentials that are verifiable and tamper-proof.

In addition to the SDP model proposed, contributions from recruiters will reinforce necessary practices through several activities. Open-ended questions like "What is the ideal job seeker?" and "What kind of knowledge, skills, and personal attributes do you look for when you have a hiring process?" and semi-structured interviews can be an effective way to collect qualitative data and allows to explore additional topics or follow-up on responses as the conversation progresses from recruiters. These types of questions and interviews allow the recruiters to share their insights and opinions in their own words, which can provide valuable information about the qualities and characteristics that they value in job candidates.

This can make it difficult for students to think beyond classroom learning and explore methods of improving their technical skills. However, it is important for higher education institutions to recognize the importance of hands-on, experiential learning in helping students to develop the technical competence and skills that are necessary for success in the job market.

By providing opportunities for students to engage in real-world projects, internships, and other forms of experiential learning, institutions can help students to develop the skills and knowledge that are necessary to succeed in a variety of careers while the students are pursuing their degree at the institution.

IMPLEMENTATION CHALLENGES OF THE MODERN TOOLS AND TECHNOLOGY FOR INSTITUTIONS/ UNIVERSITIES

The implementation of Blockchain, AI and Data analytics in education may present various challenges such as lack of standardization, data privacy and security concerns in addition to issues at the organization such as lack of commitment or the overall student population. There are also challenges in figuring out how to effectively integrate these new technologies into the existing educational system, providing proper training to educators, and ensuring that the technology is accessible to all students regardless of their socioeconomic background. These challenges could be addressed by Institutions/Universities by providing a general framework for implementation.

In India, the majority of educational institutions do not have adequate training, support and resources for educators to use technology effectively in their classrooms. This can be due to a variety of factors such as lack of vision, lack of funding, lack of commitment by the stakeholders or inadequate training programs to mention a few.

Additionally, there may be a gap in technology literacy among older educators who may not be as familiar with the latest technologies which may hinder the teaching-learning process.

However, with the increasing emphasis on technology-enabled education, many educational institutions and government organizations are working towards providing teacher training programs (train the trainer) to address this gap.Even though internet access and infrastructure in India have been improving, there are still certain rural and remote areas where internet access is limited. Additionally, there may be a digital divide among educational institutions, where some may have better access to technology and the internet compared to others.

These challenges can be overcome by availing services from trusted service providers after signing a Non-Disclosure Agreement to ensure the safety of the data. The several ways to overcome the challenges of implementing blockchain, AI, and data analytics in education to increase students' employability are as follows:

Cost: Obtain funding through government agencies, and private firms as it can be costly to implement blockchain technology.

Start small: Begin with a pilot project to test the feasibility of the technology and gather feedback from students and faculty.

Build a strong team: Bring together experts in blockchain, AI, data analytics, and education to work on the implementation.

Address data privacy and security concerns: Create a governance structure for the blockchain implementation can be created to ensure that the technology is compliant with data privacy laws and that data is secure.

Provide training and resources: Create training centres with experts to provide training to faculty and students on how to use the technology and make resources available to support their learning.

Collaborate with industry: Partner with industry leaders to create opportunities for students to apply what they have learned and gain real-world experience through industry-driven projects, internships and projects.

Focus on practical applications: Use the technology to solve real-world problems and provide students with hands-on experience.

Use data analytics to track student progress and identify areas for improvement, so that students can be directed to resources that will best help them succeed.

Data collection and quality: It's important to ensure that the data being analyzed is accurate and relevant and that it is collected in a way that is compliant with privacy regulations.

Data storage and management: It's important to have the right infrastructure and systems in place to store and manage large amounts of data.

Data visualization: It's important to be able to present data in a way that is easy to understand and actionable so that educators and administrators can make informed decisions.

Bias and fairness: AI systems can perpetuate existing biases in the data they are trained on, so it's important to take steps to minimize and detect bias in AI systems.

Transparency: It is important to ensure that the decision-making processes of AI systems are transparent so that educators and students can understand how AI arrived at its conclusions.

Create an ecosystem of collaboration between students, teachers, administrators, industry partners, and researchers to share knowledge and resources to achieve the common goal of improving student employability.

Interoperability: It is important to ensure that different data analytics, artificial intelligence and blockchain systems can communicate and interact with each other so that they can be integrated into existing systems.

Develop curriculum and programs that align with industry needs and standards, so that students will be well-prepared for relevant careers.

Continuously evaluate and improve: Continuously evaluate the implementation and make adjustments as needed to improve student outcomes.

Align with the institution's and department's missions and visions: It's important to ensure that the implementation of data analytics, artificial intelligence and blockchain aligns with the institution's and department's overall missions and visions so that it can be used to make decisions that will benefit the institution and its students.

By following these steps, it will be possible to successfully implement by integration of blockchain, AI, and data analytics in education to increase students' employability.

FUTURE SCOPE OF STUDY

Looking forward to the potential breakthroughs in using Brain-Computer Interfaces (A technology which involves the use of brain signals to control or interact with computers or other electronic devices) for education, has the potential to revolutionize the way we learn and enhance the educational experience for students of all ages if used sensibly, securely and safely with the right intention of solving problems ethically and making lives simpler. As with any new technology, it's important to consider the potential ethical and privacy implications when it comes to implementing BCI technology in education.

The integration of Brain-Computer Interface (BCI), Blockchain, Artificial Intelligence (AI), and Data Analysis technologies can potentially improve students' employability in several ways:

One potential application of BCI technology in education is as a tool for enhancing focus and attention. In a pilot study using BCI technology, researchers (Yufei Huang et.al [9]) provided real-time feedback on brain activity to students with ADHD during a 12-session attention training program. The BCI system measured the students' brain activity, provided real-time feedback, and alerted the students when their brain activity indicated a loss of focus or attention. The study showed significant improvements in the students' ability to sustain attention and complete tasks, as well as reductions in symptoms of ADHD.

BCI-powered devices could be used to monitor students' brain activity in real-time and to gather data on students' cognitive processes, which can be analyzed alongside performance data to provide a more complete picture of student abilities, and feedback on their level of attention and engagement. This feedback could then be used to help students identify and address areas of distraction, and improve their ability to focus.

Another potential application of BCI in education is as a tool for enhancing memory and learning. BCI-powered devices could be used to record and analyze students' brain activity during the learning process, providing insights into which teaching strategies are most effective for different types of learners. This information could then be used to optimize the curriculum and teaching methods, resulting in better student outcomes.

BCI technology can also be used to provide students with more personalized learning experiences. It can be used to track the brain activity of students and understand how they learn, this can help to create personalized learning plans and adaptive teaching strategies. BCIs can be used to gather data on a student's cognitive processes, which can inform career guidance and mentoring recommendations.

Moreover, BCI technology can also be used in virtual reality and augmented reality scenarios, enhancing the experience and making the lessons more interactive and immersive. BCIs can be used to provide a more direct and immersive learning experience by allowing students to interact with educational content using brain signals.

For example, BCIs could be used to create interactive educational games or simulations that are controlled by the student's brain activity, making learning more engaging and motivating.

It provides students with disabilities, such as spinal cord injuries or motor neuron diseases, with alternative means of communication and interaction.

It can help to improve focus, attention, memory, and decision-making skills. For example, BCIs could be used to control a computer or a robotic arm using brain signals, allowing individuals who are unable to use their limbs to still participate in educational activities.

It's worth noting that Brain-Computer Interface technology is still at an early stage of development and it is not yet widely used in education. There is ongoing research and development in this field, and it's expected that BCI technology will become more prevalent and sophisticated in the future.

There are several challenges that may arise when implementing Brain-Computer Interfaces (BCI) for education. Some of these include:

High cost: BCI technology can be expensive to develop and implement, making it difficult for colleges or universities with limited budgets to access it.

Accessibility: BCI technology may not be accessible to all students, particularly those from low-income backgrounds.

Lack of standardization: There is currently no standardization of BCI technology, which makes it difficult for educators to know which products to use and how to properly integrate them into their curriculum.

Privacy and security concerns: BCI technology can collect personal data from students, which raises concerns about data privacy and security.

Limited research and development: There is limited research and development in the field of BCI for education, which means that the technology is still in its early stages and may not be fully developed or tested.

Lack of trained professionals: There is a shortage of trained professionals who can properly implement and integrate BCI technology into the classroom, which can limit its effectiveness. Teachers and educators may need specialized training to effectively integrate BCI technology into the classroom, which can be time-consuming and expensive.

Ethical concerns: The use of BCI technology raises ethical questions related to its impact on students' privacy, autonomy, and well-being.

It is important for the management of educational institutions and other stakeholders to consider these challenges and work to find solutions that address them so that BCI technology can be effectively and ethically integrated into education systems.

CONCLUSION

The implementation of the National Education Policy (NEP) and the Skill Development Program (SDP) along with technologies such as Blockchain, AI, Data Analytics, and BCI in the education system can have a positive impact on increasing the employability of engineering students. These technologies can provide students with the necessary skills and knowledge to excel in today's digital economy and prepare them for the jobs of the future.

Suggestions mentioned earlier for enhancing employability demonstrate that the integration of blockchain and AI technology could lead to a more efficient, effective, and personalized learning experience for students, ultimately improving their employability by providing them with the skills and credentials they need to succeed in the workforce.

However, it is important to note that the successful implementation of these technologies in the educatin system requires significant investment in infrastructure and resources, as well as specialized training for teachers and educators. It also requires addressing issues of data privacy, security and ethical concerns.

In conclusion, the integration of NEP and SDP with technologies like Blockchain, AI, Data Analytics and BCI can bring a positive impact on the employability of students and can help to close the skills gap, but it requires a well-planned and thoughtful implementation strategy, with necessary investment and support, to ensure that the benefits of these technologies are realized.

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RESEARCH

IMPACT OF COVID-19 ON ONLINE EDUCATION: INDIAN PERSPECTIVE

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ABSTRACT

The Covid-19 pandemic has forced online education to become an integral part of all educational institutions around the world. Due to the pandemic there was an enormous amount of surge in the requirement for online education content around the world. To help the students' in staying learned there was a need for quick and responsive action from institutions and various MOOC platforms around the world. They did respond to the situation at hand in the most effective manner by providing course content covering a very wide range of domains, licensed certifications so that they stay updated with the skills demanded by the industry and many more measures to ensure that students' get access to the best course content. Now it was up to the students' to make use of the resources provided and stay on track to achieve whatever they aimed for. Here we have presented you the impact of the Covid-19 pandemic on the students' learning prior to it and post the lockdown. The study was conducted on students' pursuing their Under-Graduation in Engineering at various institutions in India. Primary data was collected from the students' through an online survey tool and was conducted on a sample of 500 students' from various institutions across India. The analyses and findings of the study give the views of the students' in respect to the impact of the Covid-19 pandemic on them.

Keywords: *Covid-19 Pandemic, India, Online education, Online courses, MOOCs*

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INTRODUCTION

India reported its first laboratory confirmed case of the 2019-nCoV in Kerala on the 30th of January, 2020. As of 27th February, 2020 with all three cases of the 2019-nCoV reported in Kerala fully recovered and discharged from the hospital, no further cases had been reported. The WHO declared the Novel Coronavirus Disease (COVID-19) outbreak as a pandemic on the 11th of March, 2020. The Prime Minister of India on the 22nd of March called for the 'Janata Curfew' urging people to stay home, enforcing public led social distancing interventions which were first of a kind restriction among the many that came the way in order to contain the Novel Coronavirus Disease. With effect from 25th March, 2020 an order for State/UTs prescribing lockdown for containment of COVID-19 epidemic in the country for a period of 21 days was issued. The WHO backed India's response to COVID-19 to have been pre-emptive, pro-active and graded with high-level political commitment and a 'whole government' approach to respond to the COVID-19 pandemic.

Educational institutions initiated closure at the state level due to the COVID-19 pandemic on the 22nd of March, 2020. With education coming to halt all of sudden, it wasn't the beginning period of difficulties for only students but also for their parents and teachers. Students pursuing at all levels of education remained stranded not knowing what to do. Due to the large diversity of students present in the country the difficulties and challenges to everybody involved directly and indirectly in educating the young minds of the country kept on increasing.

This was the right time for improving the existing infrastructure to support online education and also innovate methods for effective reach of online education to all students. The government made excellent strides in improving and introducing methods to reach out to the students to help them in continuing their learning. This was done by streaming of classes through televisions and online video communication platforms.

As this happened on one side and was mostly to keep the younger students to stay learned, on the other hand there was increase in learning through certified Massive Open Online Courses (MOOCs) which were offered by Universities around the globe on platforms like SWAYAM, NPTEL, Coursera, EdX, Udacity, Udemy, Unacademy etc.,. It was not that these modes of online education did not exist prior to lockdown but students were mostly unaware and some felt a lack of time in taking up these online courses. But as a result of the pandemic many factors like certified courses being offered for free, plenty of time at hand, freedom to pursue subjects/topics of interest etc., provided the students of Under-Graduate and higher levels a great chance to learn and shape their future.

This research focuses on Engineering students pursuing their Under-Graduation, on how the Covid-19 pandemic impacted them in their willingness to achieve whatever they had aspired for or would be going to aspire for in the future.

AIM

This research aims to sstudy the impact of Covid-19 on students' behaviour towards the adoption of online mode of learning.

METHODOLOGY

This study is based on the primary data that has been collected from students, who are currently pursuing their Under-Graduation in Engineering at various colleges and universities. The questionnaire had been prepared using the aid of Google Forms - an online survey tool, which was used for collecting data. The questionnaire contained a total of 35 questions split across 6 sections to ease the understanding and answerability of the respondents. A pilot test of the survey was done with 30 participants, which included various teaching faculties and students. Appropriate revisions to the questionnaire were made based on their feedback and suggestions. The study was done on 500 engineering students studying at the level of Under-Graduation with 86 Female and 414 Male participants. Most of the participants belonged to the age group 19-22 Years. The period of study was in the month of Aug. 2020.

RESULTS AND DISCUSSIONS

WILLINGNESS TOWARDS TAKING OF ONLINE COURSES

The rapid evolution in the availability of technology at hand has had a major impact on all aspects in the way life is being lived. One of the major ones being education, technology is playing a major role in revolutionizing the contemporary mode of education and forcing the teachers and students to up-skill at all levels. There are an infinite number of sources available online to learn anything that one wishes to. The only criteria to this being the willingness and the self-motivation to learn, grow and reach new heights. Here we present to you the reasons for which students' are taking up the courses online.

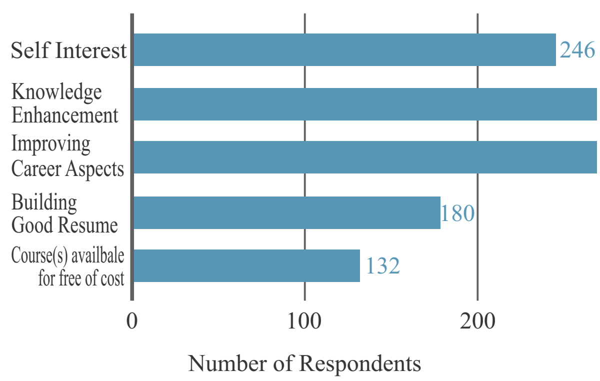

Figure 1: Reasons for taking up of the online courses

Figure 1 shows that the majority of the students' are taking the online courses to enhance their current knowledge, to improve their career aspects and also an interesting number shows that they are taking the courses out of self-interest. The other reason among the above ones being, building a good resume so that they can be ahead of others in the skills that the industry demands and the final reason being that the courses are available free of cost.

STUDENTS' PREFERENCE IN TAKING OF EXAMINATIONS AND TESTS FROM HOME

Examinations and tests are the important methods of evaluating students' learning abilities regarding the subject in the education system. Since it is one of the direct methods of comparing the students' understanding it has to be fair, transparent and honest from both students and institutions point of view. Unless and until the method adopted justifies both the students and institutions efforts, there isn't any obstacle for the conduct of online examinations and tests. Moreover due to the present circumstances it is very important to continue with an effective and systematic mode of examinations and tests online since there aren't any alternatives. The preference of the students regarding taking examinations and tests online from their homes is presented.

Table 1: Preference in taking of online tests and examinations from home

Scale	Responses	Responses in %
0-2	78	15.6
3-6	141	28.2
7-10	281	56.2
Total	500	100

Table 1 clearly shows that, out of the 500 respondents, 281 of them have a clear preference for taking examinations and tests from their home, the possible reasons being their safety and others' safety in conditions like these. 141 respondents are not that clear on whether the examinations and tests have to be conducted from homes through offline mode at the colleges and 78 among the above being clear that they do not have a preference towards online examinations and tests from home with probable reasons being availability of facility of uninterrupted internet, transparency of examinations and tests etc.,.

REASONS FOR HIGHER PREFERENCE TO OFFLINE MODE OF EDUCATION

The traditional and the online modes of education have their own advantages and disadvantages and it is a mixed bag of students having preference for both traditional and online mode based on certain conclusive self-experiences. Here we present to you the reasons for students having a higher preference for offline mode of education.

Given choices of teachers' guidance, improved social skills through human interaction, collaborative learning, and supervised learning and also an option of expressing any other reason for their preference, here we present to you their view in the form of a table.

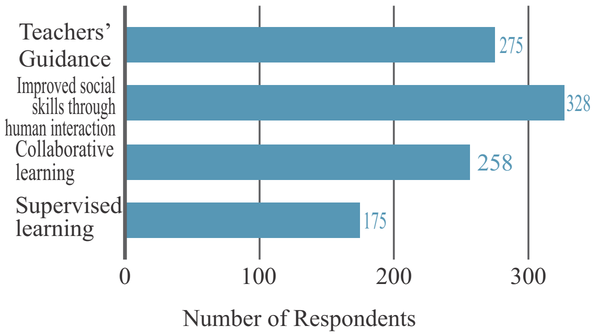

Figure 2: Reasons for higher preference to offline mode of education

Figure 2 shows that 328 out of the 500 students' had a higher preference for offline education due to the fact that human interaction improved their social skills .Teachers' guidance and collaborative learning also was one of their top preferences for offline mode of education. It can also be seen that 175 respondents also missed supervised learning under their faculties which can only be obtained effectively when monitored in a traditional classroom environment.

ACCEPTANCE LEVEL OF STUDENTS' TO HAVING TIME LIMITATIONS DUE TO INTERNALS AND EXAMINATIONS PRIOR TO THE LOCKDOWN

Time management is a skill and not all can ace at it. But being students it is one of the most important skills to have and follow. There are students who on self-interest explore other methods and paths of learning other than the syllabus that is taught in colleges. Here we present to you the acceptance level of students to having time limitations due to the tests and examinations at college.

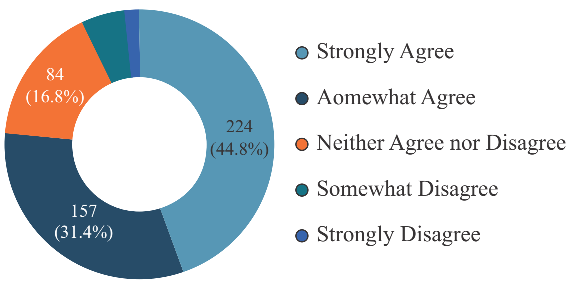

Figure 3: Acceptance level of students' to having time limitations due to internals and examinations

Figure 3 clearly shows the students' acceptance level of having time limitations with 224 students' strongly agreeing to this. 183 students' did not give clear indications in their agreement to the statement on whether they agree or disagree with the statement. 9 students showed their strong disagreement with 157 of them neither agreeing or disagreeing with it.

PREFERENCE FOR COURSE CONTENT IF MADE COMPULSORY

The students across the world definitely don't get access to the best of the knowledge resources that are available. Students get to know the difference between the contents only when they are exposed to the same contents by different sources. Here we present to you the students preference for online content between the resources provided by their institutions and the ones that are available on MOOC platforms when online learning is made compulsory.

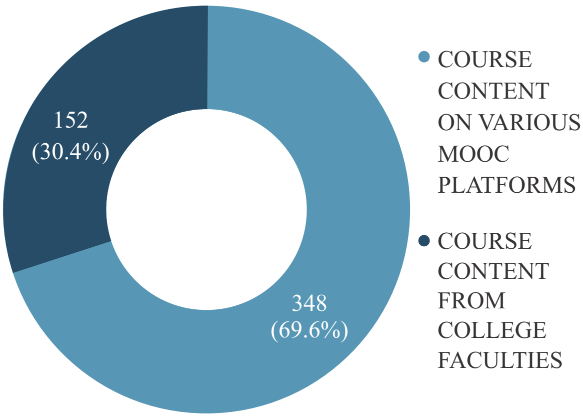

Figure 4: Preference of course content

Figure 4 indicates clearly the students' preference for course content when made compulsory with 348 respondents opting for the content available on various MOOC platforms and the remaining 152 opting for the content provided by the faculties in their respective institutions.

WILLINGNESS IN TAKE UP OF PAID ONLINE COURSES

The courses that are available on various MOOC platforms cover almost everything that one can think of in the present world. Having the access to such quality content even in such difficult times like these gives the opportunity for the students to learn and improve their skills. Here we present to you the students' response towards taking up the paid online courses.

Table 2: Willingness in taking up of paid online courses

Scale	Responses	Responses in %
0-2	202	40.4
3-6	193	38.6
7-10	105	21.0
Total	500	100

Table 2 shows that 105 out of 500 students' are willing to take up paid online courses, 193 being not clear on whether they will be taking paid online courses and 202 students' that is the majority of students having the least amount of interest in taking of paid online courses with possible reasons being financial difficulty, lack of facility etc.,.

As a follow up to the above statement we would like to present to you the number of paid online courses that the students' have taken up and completed from various MOOC platforms.

Table 3: Number of paid online courses completed

Scale	Responses	Responses in %
None	275	55
1-3	174	34.8
4-6	34	6.8
7 and more	17	3.4
Total	500	100

ANALYSIS ON STUDENTS WITH RESPECT TO INTERDISCIPLINARY COURSE CONTENT

Interdisciplinary courses are essential in strengthening the students' towards the current trends that exist in the industry so that it helps in reducing the gap that exists between the skills demanded by the industries and the skills that the students' possess. It helps in exploring new avenues by combining the knowledge of more than one domain. Here we present to you the type of courses that the students' have been doing with respect to their core domain.

Table 4: Analysis on students' with respect to interdisciplinary course content

Nature of Courses	Responses	Responses in %
Related to core domain	144	28.8
More advanced concepts	98	19.6
Interdisciplinary	258	51.6
Total	500	100

Table 4 shows that 258 out of 500 students' have taken up courses that are interdisciplinary which shows that students are very keen on developing their skills meeting the demands of the industry. 144 students' have taken up courses related to their core domain and 98 of them are learning advanced concepts related to their core domain through courses online.

As a follow up to the above statement we would like to present to you the courses taken up in numbers regarding interdisciplinary courses.

Table 5: Number of interdisciplinary courses taken up by the students'

Nature of Courses	Responses	Responses in %
None	189	37.8
1-3	255	51
4-8	50	10
9 and more	6	1.2
Total	500	100

LIKELINESS IN TAKING UP OF EXTRACURRICULAR OR HOBBY ACTIVITIES ONLINE

Extracurricular and hobby activities play a vital role in the all-round development of an individual be it a student or not. But in case of students, since they are in the learning phase of life, they try and participate in the extracurricular activities more out of eagerness to try new domains of learning, exposing them to indirectly develop social skills by meeting new people and in turn expanding their network. But due to the pandemic the students haven't been able to participate in the extracurricular activities due to the restrictions around and for their own safety. So we present here the likeness of students' considering taking part in extracurricular or hobby activities like music, karate, dance, cooking etc., online.

Table 6: Likeliness in taking up of extracurricular or hobby activities online

Scale	Responses	Responses in %
0-2	146	29.2
3-6	132	26.4
7-10	222	44.4
Total	500	100

Table 6 shows that 222 out of 500 students' are very much interested in taking up extracurricular and hobby activities so that it helps them for their all-round development. 172 students are not that likely while 111 showing very less likeness in taking online extracurricular and hobby activities.

FAMILIARITY AND COMFORTABILITY WITH SEARCHING AND VIEWING ONLINE COURSES FROM DIFFERENT SOURCES

It is not very easy for everyone to stay updated with the growing technology around us. Everyone needs their own time in updating themself with the current technologies that are coming up. So we present to you the students' familiarity and comfortability in searching and viewing the online course content through the web on various MOOC platforms.

Table 7: Familiarity and comfortability with searching and viewing online courses from different sources

Scale	Responses	Responses in %
0-2	112	22.4
3-6	181	36.2
7-10	207	41.4
Total	500	100

The table shows that 207 students' that is the majority of students are familiar and comfortable in searching and viewing online course content. 181 students' are somewhat familiar and comfortable with 112 students' being least familiar and comfortable in searching and viewing the online courses.

PREFERENCE TO TYPE OF DEVICE USED FOR ONLINE LEARNING

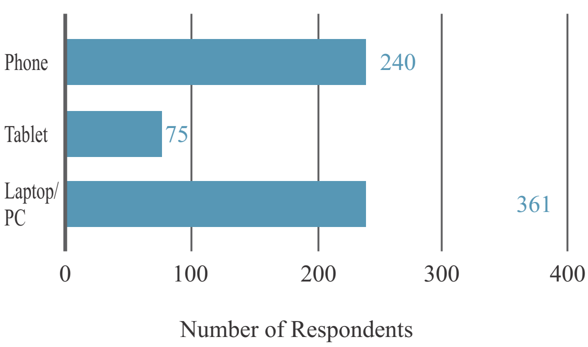

Figure 5: Preference to type of device used for online learning

Figure 5 shows that most of the students' prefer Laptop/PC for pursuing courses online. The probable reasons being the requirement of Laptops/PC for coding, design, simulation etc.., software which were provided by their respective institutions when conducted through offline mode, responsive desktop sites (most of the sites aren't responsive in mobile or tablet view), ease of usage, wider screens which have less impact on the eyes etc.,

STUDENTS' VIEW ON ONLINE COURSE CONTENT

All the students' do not find the online course content to be helpful since each and every student has his/her own way of understanding the topics. Some find it difficult to follow the online courses while some others find it very easy. Here we present to you their ease of following the courses online.

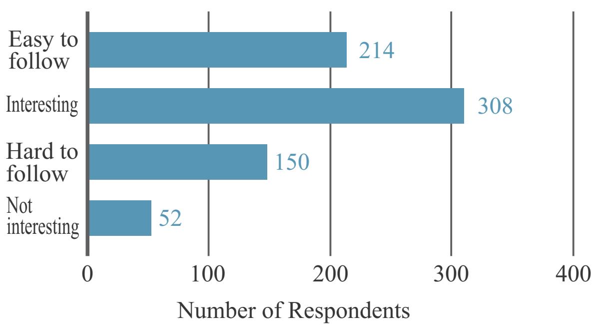

Figure 6: Students' view on online course content

Figure 6 shows that 308 out of 500 students' feel online courses to be very interesting with 214 students' having a feeling that they are easy to follow. 150 students' find it hard to follow while 52 of them find the online courses to be not interesting.

OVERALL ANALYSIS

Table 8: Overall Analysis

About Participants		
Average Age	19-22 Years	
Gender	Male	82.8%
	Female	17.2%
Studying in	VTU Autonomous Institute	73.4%
	VTU Institutes	22.8%
	Others	3.8%
Region of Residence	Rural	26.4%
	Semi-Urban	14%
	Urban	59.6%
General Routine		
Average time spent on gadgets per day	5 Hours	
Average time spent on studies in a day	3 Hours	
Requirement of smart phone for studies	83.1%	
Routine before lockdown		
Average number of seminars, webinars etc.., attended	1	
Average number of online courses completed before lockdown	1	
Routine during lockdown		
Average time spent on online courses in a day	2 hours	
Average number of seminars, webinars etc.., attended	2	
Average number of online courses completed before lockdown	2	
About online course		
Most used platform	NPTEL, SWAYAM, Coursera, Ed, Udemy	
Most pursued domain	Python,AI and ML	
Most preferred device	Laptop or PC	
Most useful	For beginners and intermediates	
Most received reasons for taking up online course	Self-interest, Knowledge enhancement, building good resume and improving career aspect	
Reason for not taking online course	Lack of time	113
	Not Aware	89
	Not Interested	80
Online course is	Easy to follow	214
	Interesting	308
	Hard to follow	150
	Not interesting	52
Time taken to grasp online course compared to one hour of offline class	Slightly lesser time	40%
	Same time	29.4%
	More time	30.6%

FINDINGS

There has been an increase in perusal of online courses during the lockdown when compared to before the pandemic.

Students prefer online courses from various institutes over online classes from college faculties. This might be due to flexibility of timings. Students can pursue some of the courses whenever they wish to.

Gadgets have become an integral and very essential part for studies.

Most of them have higher preference to offline classes due to teachers' guidance, collaborative and supervised learning.

Main reasons for not pursuing online courses before lockdown are lack of time due to continuous internal tests and examinations.

Main preference for online courses is for building a good resume, knowledge enhancement and self-interest.

Students are mainly pursuing the most advanced language python. Python would be the basic skill of every engineer in the coming days irrespective of branch.

CONCLUSIONS

The Covid-19 pandemic disrupted the entire education system all over the world but it can be seen that the students' stayed focused on learning and enhancing their skills very effectively by utilising all the resources they were provided or offered, which helped them in keeping their goals and aspirations on the right track whilst the pandemic. This can be clearly seen from the responses of the students' wherein they were able to learn the most popular programming languages and topics like Python, Artificial Intelligence, Machine Learning etc...They were able to complete a significant number of courses during the lockdown when compared to the time prior to the lockdown wherein the reasons sighted for this were lack of time due to continuous internals and examinations, unawareness of the availability of courses on MOOC platforms, lack of interest etc…As such results and discussions like these based on the responses of the students have been formulated along with some key aspects that involve the views on the online mode of education have also been analysed and stated.

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1. **Passion:**
   The soul of Welingkar blossoms in our heart, mind and body.

2. **Breakthrough Thinking:**
   We foster academic rigour in an environment conducive to innovation.

3. **Result oriented, Process driven Work Ethic:**
   We adopt dynamic quality processes to ensure accountability and exceptional performances.

4. **We Link and Care:**
   We support and collaborate with all our stakeholders through mutual trust and respect.

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We are committed to give our students Quality Management Education in tune with the changing needs of business and industry.

We shall endeavor to do this by:

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- Making the environment conducive for students to develop their creativity, Leadership skills and ability to learn continuously.

We shall follow a data oriented factual approach to Quality Management leading to continual improvement of our processes culminating in total customer satisfaction.

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