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FROM THE DIRECTOR

Well settled and mothers to one or two children, Suman, a researcher responsible for five doctoral students, Nadja a web chief editor responsible for a team of twelve, and Susan a newly proven entrepreneur, are women who benefit from jobs with flexible work hours and function more or less autonomously. In theory, things look good. However, with the Covid -19 lockdown being gradually eased their children are not being sent back to school or daycare centres and they are now glued to their online classes. These women now along with their spouses now work on a full time basis while juggling with the responsibility of taking care of their children, their home-schooling and handling a surplus of domestic chores

With employees being urged to either getting back to work or resuming work on a part-time basis the issue now is no less worrisome. Though many of these women can very comfortably subcontract domestic chores as they have the financial means, but they find it difficult to take care of their kids and manage their pedagogical follow-up. Given the circumstance, and the need to protect elders even more, grandparents no longer seem to be an answer they once were. And not many couples can afford the private baby-sitting services and those privileged ones find difficulty in entrusting them to take charge of their children's home-schooling as well.

More than ever, the decision of whose work is going to take a priority is a problem these working couples are faced with. Who is going to be in charge for most of the parental and domestic load is again a question?

The answer seems more or less obvious as even in those families where women are the "breadwinners" and are a source of financial support to the whole family, women have internalized themselves as "caregivers" and are responsible for taking care of their kids and consequently they endure to be in charge of the major part of both parental and domestic load.

COVID 19 is no exception. Studies have shown that executives including women research and development managers, researchers, marketing directors and entrepreneurs give more importance to their households while at the same time safeguarding their professional careers. They try and make full use of the flexibility of their work while working "on the margins" of both space and time that generally is meant for their professional activity. Working before their children wake up, after they go to bed, at late night and on weekends: they now complain about working through insomnia, which generally is an outcome of anxiety that stems from a feeling of marginalisation from the work domain.

These women are now trying and maximizing their possibilities of home-office until the next back-to-school possibility amid the absence of any structure for taking care of their children. While placing priority to their partner's on-site business meetings, customer visits and their business trips these women while staying at home are being left with most part alone while facilitating academics to their kids, cooking and cleaning. With the fear as to how long will they be able to handle this situation, despite the lock-down release, Do these women feel "locked-down" at home.

Since lock-down release several men also have been taking on the flexibility of their work by allowing their work to slide into "marginalized" time and spaces. But with their wives internalizing their role as "caregivers" these men try and anticipate their children's needs while taking charge of their pedagogical follow-up and also making an earnest effort towards anticipating their partner's needs and finding solutions to relieve them.

For still many other men, the flexibility in the working of there wive's job leave them with an option to actually "unlock". However as men's work become "demarginalized and given the situation of the time off of schools and child-care facilities", women's work becomes even more "marginalized". It is now a given amongst these couples that women shall "compensate" the online classes and child care structures by making the best of the flexibility of their work while men have to return to a "normal" work space and work pace.

These women are now battling in order to be able to work. Battling against their ever growing mental load, battling against their own body so as to overcome the fatigue and exhaustion of the tiring intense days, of short nights, of femininity injunctions that have not died down with lockdown. The battle doesn't end here, as they need to now battle against the social judgment of the society. The thought whether they are trying to save their jobs at the expense of their children's physical and psychological health is something that is making them guilty. And there are still others who manage to end up scuffling with their husbands to "discuss" schedules to "de-marginalise" their tasks.

Pandemic has made these women confront with gender norms that were generally masked or at times even denied, cheers to the services (day care, school) that sustain their freedom. Making the most of the flexibility, Is it a choice of these women or is it the outcome of their internalization of the role as a "caregiver". Whatever, these women may not necessarily have chosen for their own lockdown, as the vulnerability of these women in the absence of facilities that they usually bank on to emancipate themselves through work is what the pandemic is compelling at.

Dr. Ashok Gupta
Director

EDITOR'S NOTE

More than ever, this is the right time for organizations to reboot their HR architecture, so as to make their workforce future ready for the AI age. As of now not many executives have the faith that their organizations have the required skills to prosper in an AI-enabled world and even more, not many of them even know as to what those skills are likely to be!

With the new normal setting in, nurturing human capital through ongoing processes and workflows has become even more critical for organizations of today. Capitalizing on a flexible and adaptable workforce while keeping in tune with technology is what HR has to focus on. Getting ready with workforce that is digital- ready and adaptive is the only way to emerge stronger, especially during a pandemic like this. Also the upskilling journey of the organization needs to be well-crafted as upskilling, reskilling and e-learning is what has to be infused. A progressive HR strategy that looks at AI and Analytics to explore emerging capabilities of technology while addressing HR challenges, enhancing employee experience, enabling transformation and making the workforce future-ready is the need of the time.

The current issue in its unique flavor and style brings to its readers studies on topics as broad as Balancing work life through personality traits, Artificial Intelligence in the Indian education sector and Education technology.

The Book review on "Powerful: Building a culture of freedom and responsibility" presents to its readers a crispy and tasty bite on how McCord helped create the unique and high-performing culture at Netflix.

The Review on the book "The Master Algorithm : How the quest for the ultimate learning machine will remake our world" provides an excellent taster of Pedro Domingo's revelation on how machine learning is remaking business, politics, science and war.

It is with great, enthusiasm, pride, and eagerness that we invite you to read the current annual issue of OORJA as like every other issue of this journal, the current issue too has an enormous amount of hard work and efforts by the team, which is well reflected in the impact OORJA has made in the discipline of Management & IT.

It has been an interesting journey so far as the way ahead has not been one with a completely charted course. We are a work in progress actively seeking ideas from researchers and community in terms of not only ideas, innovation and reform but also structure, goals, and vision. We remain open to where we are going and how we will get there.

Happy Reading!

Dr. Manju Nair
Editor-in-Chief

EDUCATION TECHNOLOGY: AWARENESS AMONG TEACHERS FOR ENHANCED LEARNING OUTCOME

Dr. Khushboo Sharma, Assistant Dean, School of Management Studies, Sangam University, Bhilwara
Mr. Ashok Chaudhary, Research Scholar, Sangam University, Bhilwara

Abstract

India is having largest population of children in the world. These young children are the future of the nation and thus it is imperative that they are provided with zest of knowledge to use their potential in productive manner. With the advent of technology and digitalisation every aspect of life emerged in a new form and digitalisation transformed the various stages of education learning such as critical thinking, problem solving, cooperative learning, extra connect, extension and acceleration of activities of curriculum and enrichment, etc. technological patterns paved the path of exploring new ideas that supports learning patterns by generalisations to visualise a techno savvy environment that compelled the students to perform. A modernised education system enabled with technology can help in this channelization of abilities towards result. The student teacher ratio, shortage of qualified teachers, outdated teaching methods, inadequate teaching resources and materials can hamper the delivery of quality education. This concern can be restructured with the help of technology and society can mitigate.

Keywords: Education, Technology, Digital India, Learning.

Introduction

Digital education is a priority task of government of India and is crucial to impart education to the disinterested students of rural school. The Union budget for 18-19 emphasised the government to focus on integration of technology in education sector to improve the quality of education. A budget allocation of Rs. 460 crores were given for digital education task where the main emphasis was on improvement of quality education with the help of technological support. The digital India campaign of government of India is working on adoption of digitalisation in all areas of concern. For example, E-Kranti, a major pillar of digital India has an objective of development of basic infrastructural facilities for internet set up in the distant areas of the country for technological empowerment through collaborating with various telecom service providers. This initiative is taken to give a boost through digital India campaign and the figures shows that only 9% of the rural India has the access to Internet. Thus, a lot of work is to be done with concentrated efforts to build the robust infrastructure with the help of government ad non- government organizations and CSR norms of the corporate. Education can be digitised in the rural areas by preparation of basic infrastructural set up to enable smooth functioning of education technology. The rural urban teaching environment is totally different and so customised technology is used for proper implementation of programs. A good example is Pratham where a digital classroom is initiated in the name Learn out of the box for low income schools in collaboration with Vodafone Foundation, India. Another example includes a Not for Profit scheme is E-Vidayaloka which aims to impart quality education with the help of digital technology in the remote regions of India by applicability of digital videos, presentation, aids. Alone government cannot do this massive task of digitalisation in rural India but with special organizations working for social welfare,

NGOs and Corporate houses with specific CSR objectives can lead the transformation of rural India into digital India.

Educational Technology

Education means imparting knowledge and technology means use of different tools and teaching aids in forms of scientific machines to spread information. Educational technology thus implies application of scientific knowledge to art of teaching. The technology of instructions has evolved with the scientific learning ad teaching methods where physical sciences are linked with behavioural sciences. The teaching machines are used for imparting instructions through system generated programs and emphasising on creating a teaching learning connectivity between the learner and the instructor. The traditional age of teaching like blackboards, books and papers are now converted into new age modern equipments aligned with technological development like computers, laptops, projectors, audio visual aids, etc. the programmed instructions form the basis of such education and this new form of dissemination of information is known as education or instructional technology. Instructional technology thus includes process and system through which instructions can be imparted for knowledge purpose and educational technology includes different types of systems which can be used to increase capabilities and develop skills of humans for creating awareness and making them literate regarding the scientific developments taking around the globe for human advancement and sustainable development.

Technology along with education uses different modes and media to involve students in teaching process. The modern education system also involves application of physical science along with behavioural science. The different electronic gadgets used in traditional and modern teaching methods make education sophisticated. Physical sciences and behavioural sciences both are required for making programmed instructions and learning through technical aids.
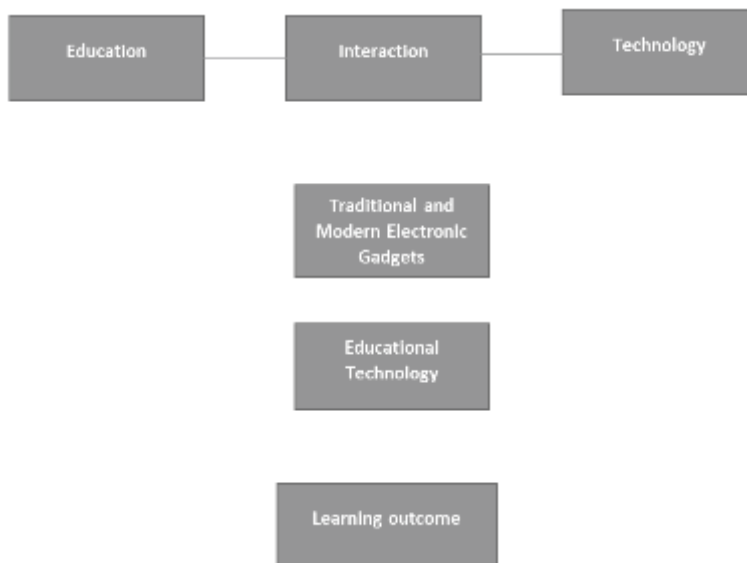
Figure 1: Education Technology

Educational Technology and Learning Outcome

Application of systematic learning processes through science and technology aims at universal improvement in teaching learning phenomenon for technical coordination around the globe. This instruction of teaching and training can ensure effectiveness and the with the use of wide range of teaching devices, electronic machines, simulators, hardwares and software as essential components make educational technology relevant in this digital era. These techniques can be used for classroom teaching, conducting research, discussions trend analysis, curriculum development, task analysis and discovering new means of learning. A teaching learning environment can be created by providing opportunities to teachers, trainers, instructors and students for practical application of theory by developing resources of learning and customisation of technological design, productivity can be enhanced by creating value and vitality for all stakeholders. The new philosophy of teaching and training engulfs application of behavioural sciences as well as physical sciences, interact with each other and generate techniques to educate the society by means of instructional material developed and transmitted through machines and devices. Thus, the matrix of learning is application of scientific knowledge in learning to improve the purpose of education and create standardisation of learning, teaching by compatibility with technology enhanced educational productivity. **Refer Figure 1.**

Characteristics of Educational Technology

·   It is inclusion of science and arts

·   Helps to control and monitor through feedback

·   It supplements teachers

·   Content analysis can be done

·   It is a system approach which includes all

·   Resolves problems

·   Introduces instruction based teaching

·   Conceptual development through programs

·   Practical teaching with the help of simulations and other techniques

Nature of Educational Technology

Educational technology is universally acceptable and strikes the use of education technology tools for teaching and instructing, communication and coordinating between the stakeholders. It can be involved in educational administration and school management for optimum utilisation of resources. It cannot replace human manpower but assist them to accomplish their tasks and objectives by integration of technology, communication, science and arts, the definition of educational technology by the Association for Educational Communications & Technology is derived to satisfy the theories of all. "Educational technology is a complex integrated process involving people, procedures, ideas, devices and organizations for analysing problems and devising, implementing, evaluating and managing solutions to those problems involved in all aspects of learning". The teachers are required to adopt technologies and mix it with traditional methods of classroom teaching. They can motivate students to embrace the new change and develop them to indulge in new teaching process for better

results. Teachers or the instructors are the controllers of class. They can promote the role of technology in content development and pedagogical application. The use of various gadgets can fascinate student's active participation in educational technology program with eagerness to learn new things and achieve roles of education. A well-equipped classroom with skilled teachers can minimise the complexity and promote effective classroom sessions. Technological evolution has creeped into all aspects of life be it social, cultural, occupational, behavioural or educational. Teachers can't be replaced by technology in classrooms but educational resources and the new format of teaching learning can have a considerable impact on the intensity of teaching. The traditional aids of teaching like education technologies, charts, maps, models, etc. are now replaced by electronic gadgets and multimedia equipments. Thus, we can conclude that educational technology has a broad spectrum and includes vast resources to emphasise on individual learning through development of a system approach to education.

Historical Perspective of Educational Technology

The development of educational technology can be studied in three phases.

14th-16th Century: The initial stage included oral instructions than introduction of manuscripts was emphasised. Later art of printing developed which introduced books for teaching the concepts of religion, society, culture and language. During the last century of this phase text books were introduced for education purpose.

17th-19th Century: Illustrative books and scientific methods of education were introduced along with verbal conceptual descriptions. Theories were propounded, model and diagrams were used to explain the concepts.

20th Century: With the advent of science and technological advancement, educational technology emerged as a new development of teaching learning. Basic sciences and behavioural sciences were integrated for a systematic approach to education use of audio-visual aids were considered as means to impart education effectively. Individual differences were taken into account and development of social anthropology was emphasised.

Review of Literature

- Bagon, Gacnik & Starcic (2018) they highlighted the inclusive technology, inclusive education to develop a better supportive learning mechanism based on the theory of learning by doing. The finding show that proper motivation and awareness is infused in the students, they are prone to learn better with the help of increased resources which supports not only teaching but better management of school facilities. The paper discussed the effects of technical learning and suggest teachers to integrate ICT even for especially abled children.

- Rana (2018) in its paper discusses the help of technical support system to manage the school operations and working. It highlights the role of government policies and availability of proper resources. Training of teachers and creating awareness for developing an integrated mechanism where education and technology helps in the process of knowledge creation. Students engagement in learning can be increased with proper training and removal of challenges like accessibility of internet, unavailability of digital devices, etc. it concludes that rural schools have more need for implementation of ICT to give exposure of innovative technology driven education to students.

- Oko & Michael (2016) concludes that implementation of ICT can improve activity based learning and motivates students to participate enthusiastically as technology enables learning through recreation for students of primary section. Positive attitude of teachers towards learning new techniques to facilitate the students can help better utilization of resources and word of mouth is one of the major tool to create awareness of the inclusion of ICT in education.

Objectives

- To study the association between gender and awareness about education technology implementation in rural primary schools.
- To study the awareness level of education technology and its significance in rural primary schools of Mewar region.
- To find whether educational technology awareness helps in better school management in rural primary schools.

Hypothesis

- $H_o1.1$: There is no association between gender and awareness about education technology implementation in rural primary schools.
- $H_a1.1$: There is an association between gender and awareness about education technology implementation in rural primary schools.
- $H_o1.2$: There is no impact of education technology awareness on its necessity to be implemented in rural primary schools.
- $H_a1.2$: There is an impact of education technology awareness on its necessity to be implemented in rural primary schools.
- $H_o1.3$: There is no impact of education technology awareness on support of its implementation in rural primary schools for better school management.
- $H_a1.3$: There is an impact of education technology awareness on support of its implementation in rural primary schools for better school management.

Data Analysis

Objective: To study the awareness level of education technology and its significance in rural primary schools of Mewar region

Table 1: Gender & Education Technology Awareness Cross Tabulation

Gender	Awareness About Education Technology Applications		Total
	Yes	No	
Male	186	64	250
Female	169	81	250
Total	355	145	500
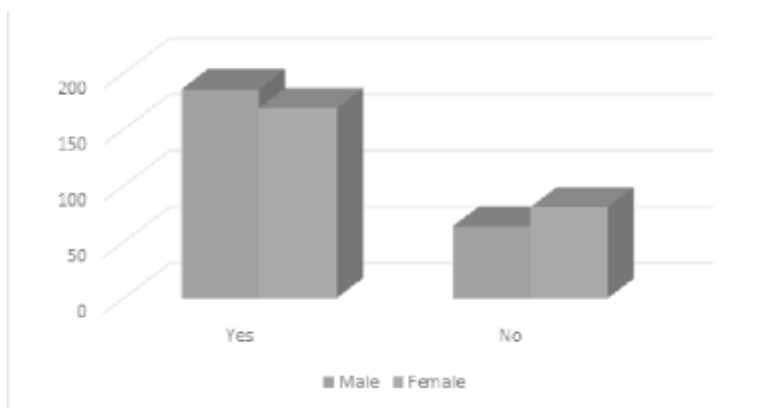
Figure 2: Gender & Education Technology Awareness Cross Tabulation

Interpretation: The relationship between gender of respondents and awareness about education technology applications is highlighted by the cross tabulation where awareness is considered to be dependent on the gender of the respondents. The data reveals that out of 250 males, 186 are aware about the technological advancements and education technology applications and 64 are not aware. Out of 250 females, 169 are aware and 81 are not aware about the implementation of education technology applications in school management. Thus, out of 500 respondents 355 are aware in which the number of males is slightly high than females.

Based on the above data the assumption is made that gender has no significant relationship with awareness about education technology applications. This null hypothesis was tested statistically with the help of chi square test. **Refer Table 1 & Figure 2.**

Chi square Test

The frequent use of chi square is for testing the null hypothesis that two variables under study independent of each other. If they are not independent, there is an association between the two criteria. The test only indicates whether or not any dependency relationship exists between the two attributes. While applying the test the null hypothesis is that the two attributes are independent.

- **H_0:** There is no association between gender and awareness about Education Technology implementation in rural primary schools
- **H_a:** There is an association between gender and awareness about Education Technology implementation in rural primary schools

Table 2:Chi square Output

Calculated Value	Tabular Value	Degree of Freedom	Hypothesis (H0)
1.628	3.84	1	Accepted

The calculated value of chi square is less than the tabular value for 1 degree of freedom and 5% level of significance. So, the null hypothesis is accepted that the two attributes under study gender and awareness about education technology applications are independent of each other. It means that

there is no association between gender and awareness about Education Technology implementation in rural primary schools.

Table 3: Education Technology Awareness & Do you think Education Technology is Necessary to be Implemented in Rural Schools

	Do you think education technology schools			Total
Awareness	Not Important	Important	Very Important	
Yes	20	184	151	355
No	58	32	55	145
Total	78	216	206	500

The data is cross tabulated with how many respondents are aware as well as they think that Education Technology implementation is significantly important for management of rural schools.
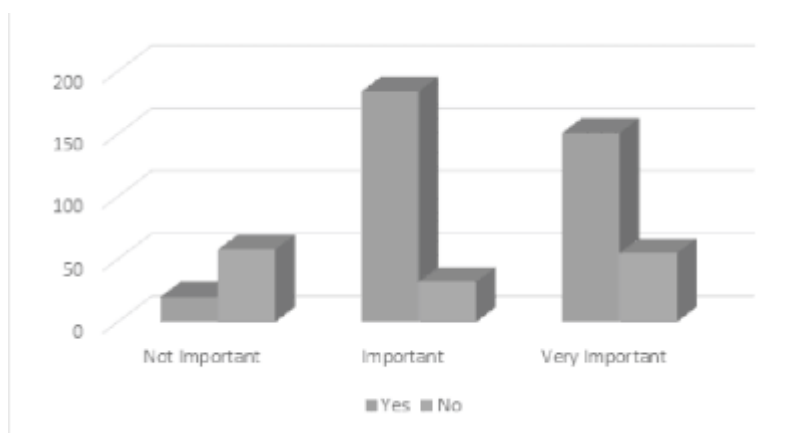
Figure 3: Education Technology Awareness & Do you think Education Technology is Necessary to be Implemented in Rural Schools

It is shown that out of 355 aware respondents. 20 respondents believe that it is not important, 184 say that it is important and 15 say that it is very important for rural schools.

Out of 500 respondents 145 are still unaware about the Education Technology implementation in rural schools but out of them 55 say that it is important and only 58 are not knowing its importance. **Refer Table 3 & Figure 3.**

- **H$_o$:** There is no impact of Education Technology awareness on its necessity to be implemented in rural primary schools
- **H$_a$:** There is an impact of Education Technology awareness on its necessity to be implemented in rural primary schools

Table 4 : Anova: Single Factor

SUMMARY				
Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	156	52	868
Column 2	3	432	144	9664
Column 3	3	412	137.3333	5840.333
Column 4	2	500	250	22050
ANOVA				
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	47355.88	3	15785.29	2.016566	0.200287	4.346831
Within Groups	54794.67	7	7827.81			
Total	**102150.5**	**10**				

Interpretation: this assumption states that there is no impact of awareness about education technology implementation on its importance as perceived by the respondents is tested for significant difference by applying ANOVA single factor. The means shows a large difference and the variance is also too high. The test calculated F ratio to determine whether this is significant statistically or not. The calculated value of F at .05% level of significance. $F_{(3,7)} = 2.0165$ and the critical value is 4.3 which is much higher than the calculated value. If p value is higher than 0.05 and so it can be inferred that the difference is insignificant i.e. the null hypothesis is accepted and we can conclude that There is no impact of education technology awareness on its necessity to be implemented in rural primary schools. **Refer Table 4.**

Table 5: Education Technology Awareness & Whether Education Technology Implementation can Support Rural Schools in Better School Management

	Whether Education Technology Implementation can Support Rural Schools in Better School Management		Total
Awareness	Yes	No	
Yes	305	50	355
No	110	35	145
Total	415	85	500
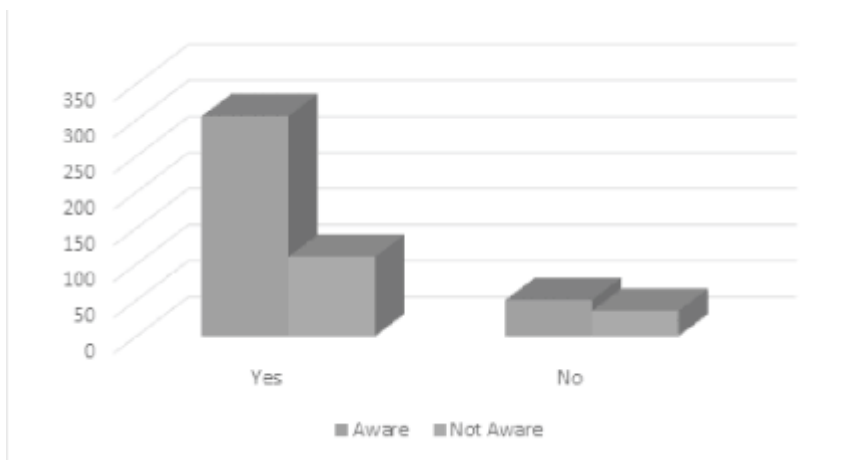
Figure 4: Education Technology Awareness & Whether Education Technology implementation can support rural schools in better school management

Interpretation: The cross tabulation between independent attribute awareness and better school management due to education technology implementation is dependent on it shows that out of 500 respondents 355 are aware about the implementation of education technology application in rural school management but out of 50 respondents say that it does not help rural schools in managing. Out of unaware 145 respondents 110 are of the opinion that it is helpful but they are not aware about it and only 35 say that it is not helpful in rural school management.

- **H$_o$:** There is no impact of Education Technology awareness on support of its implementation in rural primary schools for better school management
- **H$_a$:** There is an impact of Education Technology awareness on support of its implementation in rural primary schools for better school management

Table 6 : Anova: Single Factor

SUMMARY				
Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	2	415	207.5	19012.5
Column 2	2	85	42.5	112.5
ANOVA					
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	27225	1	27225	2.847059	0.233594	18.51282
Within Groups	19125	2	9562.5			
Total	**46350**	**3**				

Interpretation: ANOVA results show that a large variance is there between the means and F computed at 95% level of significance is $F_{(1,3)} = 2.84$ which is much less than tabular value of F. Since the computed value is less than critical value therefore, we accept the null hypothesis. Hence, the difference is insignificant which is also proven by a high value of p=0.23 which is higher than 0.05. **Refer Table 6.**

The results depicts that there is no impact of Education Technology awareness on support of its implementation in rural primary schools for better school management

Conclusion

Digital education in India is still in developmental stage which is far away from Global Education Standard and requires seem less efforts to make India more and more digitalised. "Digital education refers to a education which is given with the help of digital equipments." This definition clarifies that education using new technology to make learning teaching effective is termed as digital education and it is not limited only to urban areas but extended to rural areas to use new techniques in the classroom for educating the future generation of the country. The traditional system of education has to be transformed into digital set up to upgrade the Indian education system. with this aim the government of India has launched the campaign Digital India for making the country empowered digitally for fruitful results in the future and linking the rural masses with the main stream of digitalisation. The three important aspects of Digital India Campaign are- Digital Infrastructure, Digital Services and Digital Literacy.

The challenges raise for countries like India. The Indian condition is worst due to large population size, diverse geographical area, low literacy rate, low penetration of network in rural areas and lack of awareness about the importance of education. It is difficult to implement basic education methods, despite of vast technological advancement i.e. far away from the rural India

Specially in countries like India which are still having a crunch of resources, the challenges of implementation are numerous and it is crucial to make education compulsory for all for the benefit of the society and nation as a whole. The management and organization of schools have concrete objectives and these techniques can hep in solution of problems through unique pedagogy and improvements of human learning. We can conclude that educational technology is having a vast scope and can be applied to all branches of education with the use of broad range of resources and developing a systematic approach for adapting the learners to the changing environmental conditions.

Recommendation

The paper recommends that awareness about educational technology is necessary to implement it in primary schools and facilitate a technologically enabled learning environment both teachers and students. A proper support system should be created to implement technology in education at primary level in rural areas where infrastructure management is required for proper implementation of educational technology. The data also suggest that training program should be conducted for creating an awareness in rural areas among the stakeholders specially children and teachers to emphasise the use of technology in primary education.

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BALANCING WORK LIFE THROUGH PERSONALITY TRAITS: A STUDY OF MANAGEMENT EDUCATORS

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Abstract

Personal development of an individual depends upon complete knowledge of one's potential to perform and achieve goals both personal and professional. Individual personality traits can act as a catalyst to provide personification of self- concept and life management through balancing work and life issues and create a proper career path for personal and professional achievement. The management educators can analyse and examine self-performance to remove disturbances in work life balance. Thus, understanding one's own personality is crucial along with the uniqueness which can create a difference in life and make you more competitive than others. The research paper highlights the importance of individual traits which are responsible for achieving balance between work and life goal and to identify the differences between actual result and expectations of work and family. The paper highlights the relationship between big five personality traits and work life balance which ultimately improve professional and personal life. The personality traits can affect compatibility of one own self with mental and physical health and importance of phenomenal growth which can be acquired step by step leading to professional achievement. The paper focuses on balancing work life of management educators to ensure stability in the career and achievement of personal and professional goals.

Keywords: Personality Traits, Work Life Balance (WLB), Professional Achievement, Management Educators.

Introduction

Personality of an individual is a reflection of combination of traits imbibed in an individual to various psychological processes that enables a person towards an interactive module where the personality is imitated by its behavioural reaction or actions in a unique manner. Thus, personality is a blue print or a sketch of a psychological characteristics which includes a combination of natural and blended acquisitions.

Thus, personality plays an important role to determine the quality of life led by an individual by adapting through the various differences and similarities in behavioural aspects. It is important to study personality of the employees in order to observe their behavioural aspects and understand how individuals are different from each other and influence their work performance. Clarity of thoughts and control over one's behaviour can improve a person's professional and personal life. Personality has some concrete features which is unique to a person and has stable behavioural pattern which is the reflection of both internal and external elements which are developed through a specific process and constitutes the physiological and social environment of a distinct identity.

Work Life & Personality Traits

Personality traits and work life balance are associated to some extent as individuals with different

personality traits cope up with similar issues in different ways. One of the most important aspect of self-recognition is recognition of one's weaknesses which hamper the growth and is responsible for specific behavioural mindset. The strategies of self-development are formulated to facilitate involvement of management skills to reach the specific end. All social creatures have to face different issues at personal and professional front and have to live in our set up with following rules of the society thus, creating a value system of utmost importance. Educators behavioural expectations like in delicate issues decision making becomes more important than emotional outburst. Feelings have to be controlled in adverse circumstances and logic have to be applied at suitable points. Thinkers are more appropriate in such situations and feeling types are more comfortable in another aspect. Self-empowerment can be withhold through knowing one's personality and exploring reasons why people react in specific manner. Personal and professional growth is a self-perception and personality traits act as a framework to balance the imbalances and ensure compatibility between the dual role of life. Strengths and weaknesses are combined depiction of the unique personality of individuals which react for every small change. But it can be controlled through self-awareness and a balance can be created in functional aspects.

Literature Review

Kim, Jörg & Klassen (2019) studied personality traits as independent variable teacher effectiveness and burnout as dependent variable. The findings of the study are interesting in showing that the big five personality traits except agreeableness have a close positive association with teacher's effectiveness. The three personality traits which have a negative association with burn out are extraversion and conscientiousness. The educational level does not have any significant difference with the outcome. The findings can be used practically for identification of personalities and its relationship with teaching profession. Personality and personal traits definitely affect self- resource and thus, big five model can help in further extension of theoretical concepts. Thus, it is necessary to examine personal qualities and framing effective policies related to emotional stability and burnout.

Sharma & Rao (2018) in the research paper on literature review of work life balance present a comprehensive study on various issues related to the importance of steadiness between professional and organizational goals and proves that imbalance between the two will have a negative impact and create an obstacle to reach the end. Professional and personal life is very important and a person who can balance the two traits adequately can manage multiple responsibilities and attain multiple goals through effective performance. Individuals can prioritise their life events and work accordingly for better coordination between family well-being and organizational commitment. The aim of the paper includes conceptual understanding of work life balance, its objective, importance and issues related with various aspects like physical, emotional and occupational welfare. A flexible organizational HR policy can initiate retention of talent and satisfaction of employees. The paper highlights the scope of further research in various sectors like banking, education, pharma, etc.

Chaitra, Ashok & Murthy (2016) in the research study proposed that one of the major issue associated with employee satisfaction is work life balance. Organizations should focus to develop employee's welfare plans and policies for a balance between work commitment and social commitment. The present research study is focused to explore work life issues of managers working at different levels in Bosch Ltd., Bangalore. Employee's effectiveness and commitment level can be

enhanced through ensuring desirable focused on both personal and professional goals. It was found that expressive work responsibilities imbalances the social life of employees and ultimately the work life balance. Various factors which affect this pertaining issue are overtime, excessive travelling, meeting and training is scheduled after working hours. It was found that human resource management has to increase its score and role for managing work life issues of the employees. The responsibilities and job profile of individuals along with their family should be taken into account to ensure productivity and growth. The study focused on the various measures and supporting elements which are essential to observe work life matters of the employees.

Zakaria, Mat & Abdullah (2018). The five distinctive personality traits were tested for confirmation of significant relationship with issues related to balancing one's work and life. The findings assured that the contributors to ensure work life balance includes extra personality, prudence and neuroticism. While there are some traits like openness and conscientiousness which do not show a significant relationship with work life balance of teachers. The study has its own significance as it gives a clue to balance work life through specific personality traits which can be activated in teachers to create a balance between their personal and professional life. The work efficiency of teachers was to be taken into account while activating extra personalities and prudence for controlling the factors which cause imbalance. The main aim is to stabilise teachers emotionally to control their neuroticism and make them calm so that they can adapt to the changed environment for creating a balance.

Muthulakshmi (2018) in the research paper specifically targeted professionals in teaching in Arts & Science colleges. 200 respondents were selected for the survey and a quantitative study was done to explore the factors affecting work life balance and its relationship with socio-economic indicators which influence the balances and imbalances between personal and professional life. The attitudinal survey was conducted to know the opinion of sampled teachers on the effect of WLB on their personal, professional, social and psychological behaviour. Various hypothesis were framed to study the relationship between variables under study and relevant statistical tests were applied to find the influence of work life issues on management of personnel having different type of family and social structure with diverse responsibilities.

Statement of the Problem

The problem of work life balance affects all professionals due to the dual responsibility but the personality traits of an individual can act as a support system for managing it. The management educators due to the increased pressure of improving service quality and outcome are prone to face such imbalances in their career. Employee career and family life cannot be detached as a life of an individual rotates around these two aspects and individuals own deeds decides how well he is able to create a balance between the two. Some individuals are more devoted towards work life and some are more devoted towards family life and social relations. The inclination towards any one can create an imbalance like its personal interest are supreme, work performance will suffer and if work performance is superior personal life will suffer. The importance of both cannot be denied but a proper balance between the two is required for utmost satisfaction on both the fronts.

Research Objectives

• Relationship between individual's personality and Work Life Balance of management educators, and

• To see the impact of WLB on professional achievement

Hypotheses

$H_0$1: There is no significant relationship between Big Five Personality traits and Work Life Balance of Management Educators.

$H_0$2: Personality has no role in professional achievement of Management Educators.

Sample Profile

A sample of 300 management educators are selected from various management colleges in Lucknow city by stratified random sampling and having a representative sample . The survey was done and personality of the respondents was identified through standard MBTI tool &WLB score was determined in order to find relationship among personality traits, WLB professional achievement. The sample profile constitutes of 60% males and 40% females with 40% in the age group of 22-30 years, followed by 25% in 30-40 Years and an equal percentage in the age group 40-50 years and 50-60 years. Maximum no. of employees i.e. 154, almost 50% are working as Assistant Professors in Management institutes. 32% are working on designation of Associate Professor, 10.67% are working on the highest position i.e. Professor and only 6% are working as Research Associates. The respondents were distributed in three major departments. 115 respondents are from HR, 110 are from Finance and 75 are from marketing department.

Data Analysis

Table 1: Personality Type of Respondents

Personality Type	Count
Openness	48
Conscientiousness	102
Extraversion	56
Agreeableness	32
Neuroticism	5
Conscientiousness/ Extraversion	12
Conscientiousness/ Openness	24
Openness/ Agreeableness	9
Agreeableness/ Neuroticism	4
Neuroticism/ Extraversion	8
Total	300

The personality type of each respondent was identified with the help of big five personality traits questionnaire to know the differences between traits of respondents. The profile of respondents according to their traits is depicted in data which clearly identifies the respondents combination of personality traits. It is clear from the table that maximum count of 102 falls in the personality type conscientiousness, followed by 56 in extraversion, 48 in openness, 32 in agreeableness and only 5 in neuroticism. **Refer Table 1.** The five combinations of traits which were dominant among the samples are conscientiousness and openness with 24 respondents, conscientiousness and extraversion with 12 respondents, openness and agreeableness having 9 count, neuroticism and extraversion having a count of 8 respondents and minimum 4 in the combination of neuroticism and agreeableness. These respondents of different personality types can have a positive or a negative work life balance which is denoted in the table.
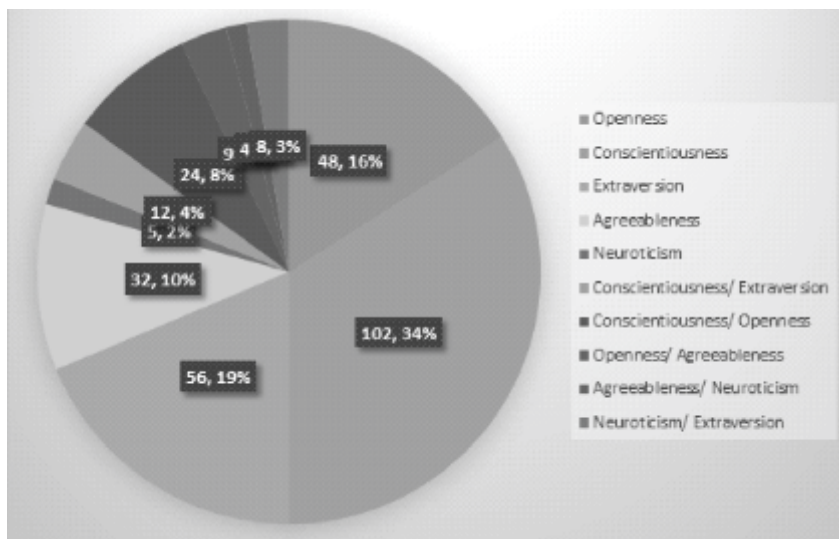
Figure 1: Personality Type of Respondents

Table 2 : WLB of Respondents & Personality Type

Type of Personality	WLB		Score
	Yes	No	
Openness	12	36	48
Conscientiousness	87	15	102
Extraversion	41	15	56
Agreeableness	23	9	32
Neuroticism	4	1	5
Conscientiousness/ Extraversion	9	3	12
Conscientiousness/ Openness	21	3	24
Openness/ Agreeableness	2	7	9
Agreeableness/ Neuroticism	1	3	4
Neuroticism/ Extraversion	3	5	8
Total	**203**	**97**	**300**

Interpretation: To test the null hypothesis stated as Personality of employees has no significant relationship with WLB, the data table shows type of personality & WLB of respondents. In some of the personality types work life imbalance is more than balance thus showing a significant difference between respondents of varied personality. Under openness personality type, out of 48 respondents 12 agreed that they have a balanced work life as compared to out of 102 representing conscientiousness personality, almost 90% showed they have a balanced work life. To study whether these differences are significant or not hypothesis testing is done to statistically infer the results. **Refer Table 2 & Figure 1.**
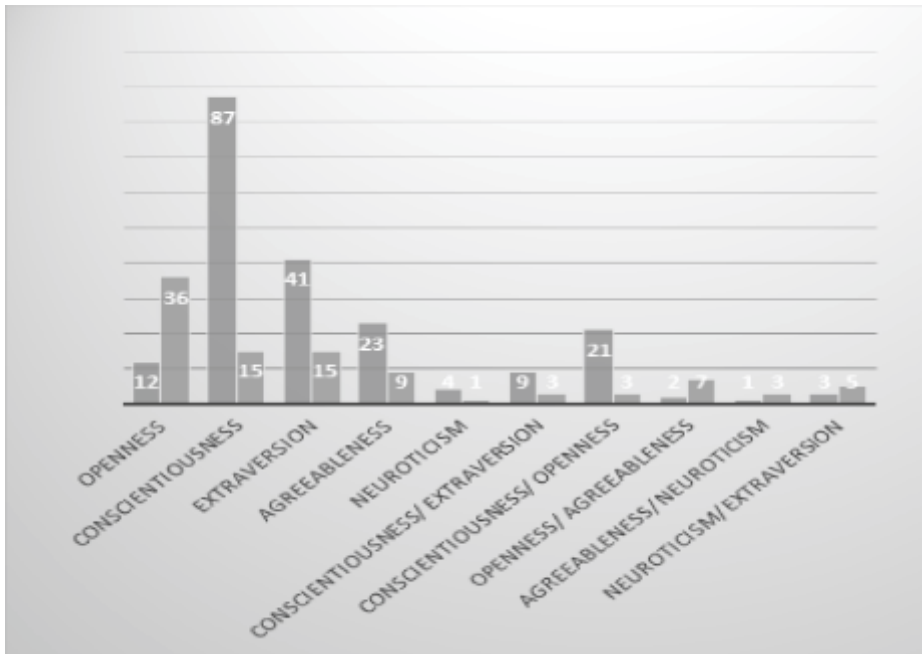
Figure 2: WLB of Respondents & Personality Type

Personality and Professional Achievement

Table 3: Cross Tabulation of Personality and Professional Achievement

Personality Type	Professional Achievement			Total
	High	Medium	Low	
Openness	18	16	14	48
Conscientiousness	82	14	6	102
Extraversion	28	8	20	56
Agreeableness	14	11	7	32
Neuroticism	2	3	0	5
Conscientiousness/Extraversion	4	6	2	12
Conscientiousness/ Openness	13	5	6	24
Openness/ Agreeableness	5	2	2	9
Agreeableness/ Neuroticism	0	1	3	4
Neuroticism/ Extraversion	2	5	1	8
Total	**168**	**71**	**61**	**300**

Interpretation: The grouping of high, medium low professional achievement with personality type of each respondent shown in the above table and individually in the graph to clarify the role of personality in ensuring a balance with personal and professional life to make a person aware about the traits possessed by him and its effect on his career and social life. It is highlighted in the consolidated table that out of 300 respondents, 168 are having high professional achievement and among these the personality type conscientiousness is having a maximum no. of respondents i.e. 82

followed by extraversion 28, openness 18, agreeableness 14 and the combination conscientiousness with openness 13. Personality traits have a role in professional achievement **or not** is tested statistically with the help of applying chi square whose results are shown in **Table 3 & Figure 2**

Hypothesis Testing

H_o1: There is no significant relationship between Big Five Personality traits and Work

Life Balance of Management Educators

Table 4 : Chi Square Output

Calculated Value	Tabular Value	Degree of Freedom	Hypothesis (H0)
75.6	16.9	9	Rejected

Result: The results of chi square output is showing that calculated value is 75.6 at 9 degree of freedom and 5% level of significance as compared to a low tabular value of 16.9. since the calculated value of chi square if high than the tabular value, the null hypothesis is rejected and we can say that personality of respondents has a significant relationship with a person's ability to balance work and life. **Refer Table 4.**

H_o2: Personality has no role in professional achievement of Management Educators

Table 5 : Chi Square Output

Calculated Value	Tabular Value	Degree of Freedom	Hypothesis (H0)
67.68	28.9	18	Rejected

Result: Since the calculated value of chi square is 67.68 which is greater than the table value which is 28.9 at 18 degree of freedom and 5% level of significance, the null hypothesis is rejected which interprets that there is a close association between professional achievement and personality. **Refer Table 5.**

Findings

An individual has different roles at work and home and the personality traits possessed by him can effectively help in managing personal and professional roles. This present research paper focuses on relationship between personality of management educators and its relationship with WLB and professional achievement. The study highlighted that some personality traits may be useful for ensuring a proper balance between different roles and minimise the mental as well as physical pressure thus ultimately giving an edge to professional career growth and support from both corners can ensure achievement.

Work life balance and professional achievement both variables are dependent on personality of individuals and so the management should rely upon the personality type to assign job profiles and customized work-life balance policies and strategies need to be defined according to the employees expectations that enable them to pursue more balanced lives. A balanced work-life is dependent on individuals traits and their requirements of professional and personal lives are different . Thus if proper balance is established it can give satisfied employees achievements and satisfaction. Professional achievement is the major concern of today's working generation. The unbeatable

competition dominant in all spheres of life leads to pull maximum potential at workplace to fight the competition and to elevate to the top of professional & organizational ladder.

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THE ROLE OF ARTIFICIAL INTELLIGENCE IN THE INDIAN EDUCATION SECTOR

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Abstract: In the present era, artificial intelligence is a buzz word and it has an impact on various sectors like healthcare, e-commerce, education, etc. Most of the mobile users use AI-based voice assistants like Siri or Google assistant. A study about AI reveals that 71% of participants agree that AI allows people to solve difficult issues and to improve life. People use AI-inspired technologies more than they know they are using. It does seem that the future of Artificial Intelligence will very bright. For the overall development of a nation depends mostly upon its education system. Day by day, the role of it in every sector is increasing including education sector. United Nations' goal is to provide quality education to every person and India will play a major role in this goal achievement. India is a developing country and has younger population in comparison to any country. In terms of population, India is the 2nd largest country and the strength of its students is more than the population of the USA. In addition, it is projected that the population of young people in India will be highest in the world by 2030. In India, there is a shortage of teachers. To compensate for this shortage, AI can play a key role in the education sector in India. AI can help teachers, students, and non-teaching staff in different ways and save time and resources. In the present article, it is discussed about the various roles of AI in the Indian education sector such as it can help teachers in preparing lesson plans according to the class and students, help in reducing the work related to non-teaching activities, provide actionable feedback, improving in teaching techniques, etc. AI can also help in various administrative work of an educational institute for example making online exams more secure, computerized grading etc. AI also helps students as supporting tutor, understanding lectures by more practical experience by using VR etc. India also launches many programs to help teachers and students such as "MOOC (massive open-online courses)" and "SWAYAM (Study webs of active learning for young aspiring minds)" and AI can support for success of these types of programs.

Keywords: Artificial Intelligence, Sustainable Development Goals, Hyper-personalization

Introduction

The intervention of Artificial Intelligence (AI) has enhanced manifold in every sector like e-commerce, healthcare, education, etc. According to **Klaus Schwab (**founder of World Economic Forum**)** in 2015, "the emergence of artificial intelligence (AI) as the dawn of the fourth industrial revolution." Artificial Intelligence is defined as computers simulate intelligent people's behaviour. AI helps us to make software processes smarter and more streamlined. This also raises every technology's reliability quotient.

Father of Artificial Intelligence, John McCarthy defined that "Artificial intelligence is the science and engineering of making intelligent machines, especially intelligent programs." AI aims to expand the capacities of several industries and improves them. The education sector was slow in taking up AI technology. The reason behind this because of teachers' and parents' apprehensions about believing machines in teaching. AI continues to have been used to transform the education sector

and address many of the questions this industry has been facing for many years. AI has also opened the doors of education in various ways like what type of knowledge require, how to retrieve it in finest way, and what barriers hinder to grab it.

Artificial Intelligence (AI)

The proverb "good things come in a small package" is used in AI hardware. AI has not left any area untouched by its inventions and novelties today. AI will change the way human beings live and function. The PwC study reveals that 71% of participants agree that AI allows people to solve difficult issues and to improve life. According to **Ram Prakash Ramamurthy, Product Manager, Zoho Lab**, "It's not just AI, but AI+X that is going to be the game-changer, X being your core business function. The future is about AI being tightly coupled with all our everyday tools until it becomes an integral part of existing tools and processes"   AI is rising briskly. It is predicted that AI industry will be reached 60 billion US dollars by 2025 and due to AI's contribution; Global GDP is likely to increase by 15.7 billion US dollars by 2030.

At a personal level, AI has already entered our lives (**Refer figure 1**). About 97 per cent of mobile users use AI-based voice assistants like google assistant and Siri, according to a survey of creative strategies. Only 33 per cent of technology customers believe they are using an AI-powered system while 77 per cent use an AI-powered system. People use AI-inspired technologies more than they know they are using.
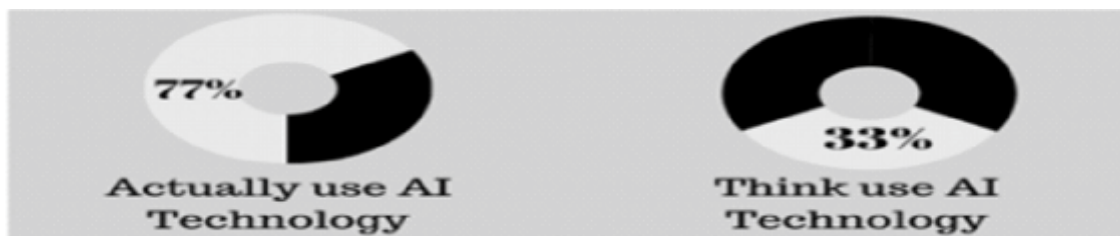
Source: Pega

Figure 1: AI in our Lives

Artificial Intelligence (AI) and Indian Economy

In India, different businesses use AI technology for their development. An industry expert associate demonstrated about AI that the Indian Enterprise Market valued at $100 million, rising at CAGR 200-250 per cent (**Refer figure 2**). This kind of futuristic development underlines the opportunity that business leaders should be planning for in the global revolution!

Current Scenario of Indian Education Sector

"Education is the most powerful weapon which you can use to change the world."

-Nelson Mandela

In terms of population, India is the 2nd largest country and it has more than half of its population below twenty-five years. India has more than 40 crores students as a part of its population which is more than the total population of the USA. In the present era, the whole world struggles for the right to quality education. Various institutions are fighting for this and trying to raise the values of education

worldwide. According to the United Nations' Sustainable Development Goal (SDG), "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" the goal is to ensure quality for everyone by 2030. Through shaping the global progress of the SDG, India is set to perform a significant role. According to a report, the population of young people in India will be greatest among the world in the end of 2030. These young people only helpful in growth of India when they are employed in any kind of legal work.
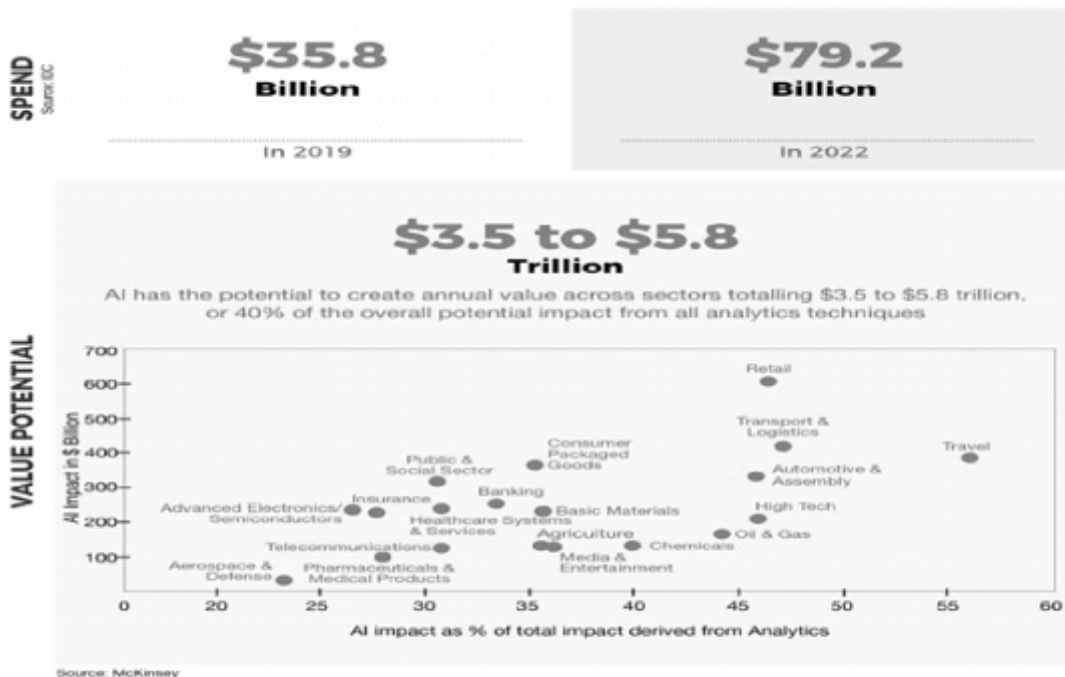
Figure 2: AI impact on Indian Economy

According to the report of CEOWORLD magazine, the rank of the Indian education system is 33rd among the 93 countries in 2020. NITI Aayog recently released SDG Index 2019-2020. Under this index of Quality Education, India achieved a combined total of 58 under the Sustainable Development Goal. The spending of government on education is less than 3 per cent of GDP. In the Budget of 2020-21, the Finance minister has been allocated Rupees 99,300 crore for the education sector and Rupees 3,000 crore for skill development. The elementary school pupil-teacher ratio is 24:1, which is lower/less than to the other developed countries. Therefore, it shall be very difficult to meet the requirement of teachers with increasing stress of population and scarcity of sources.

It is projected that at the moment over half of the country's population is below the age of 25. There is shortage of approximate ten lakh teachers in India (MHRD report, 2016). In rural India, it is also seen that one teacher sometimes has to teach more than one subject to a whole batch of students. There is a continued faculty shortage in various departments of universities and schools. Educational infrastructure is deteriorating due to a lack of funds. This inadequacy leads to a very serious problem. Students who have graduated do not have sufficient skills and practical experience at work and as a result of increased competition and industrial standards are vulnerable to unemployment.

Role of Artificial Intelligence in the Indian education sector

It's the automation that rules the world in the 21st century. Despite innovation rapidly being implemented in almost every field of existence, very few industries remain untouched. India as a global IT pioneer has been at the centre of this transition, with technology convergence in fields reaching from agriculture to governance to financial services, and regular everyday events such as food delivery. India, one of the main emerging nation also follows the technology based trends and implementing Artificial Intelligence in the education sector. Technology implementation in this sector is improving, but not at the rate needed. Schools are projected to have invested nearly USD 160 billion worldwide on education technology or '"Ed-Tech in 2016," and expected annual disbursements to increase by seventeen per cent by 2020. It indicates that the education community now acknowledges that the tools of AI can improve the process of learning and assist teachers and students.

Students and parents both have reported in recent years that the system of education in its current situation does not provide to the child's overall growth. The program concentrates on repetition learning and not on the principle being applied in reality. Students have little opportunity to succeed in sports and arts and these areas are also not promoted but grimaced upon. Often, the program fails to understand that every child is special, and one specific teaching approach may not be appropriate for every student. Students who don't grasp concepts in the classroom concepts sometimes fall behind their peers and lose faith. This means that not all of the students are included in the education system. According to a report of Market Research Future, it is projected that the growth of Artificial Intelligence in education sector will be 38 percent CAGR in the period of 2018-2023 by USD 2 billion.

Also, with the government pursuing a major service of Indian education with Schemes like "RISE (Revitalizing Infrastructure and Systems in Education)," with a budget that extends beyond one lakh crore, concentrate on new-age technologies like cloud computing, Artificial Intelligence and Virtual Reality to promote these changes.

Although cloud computing mainly helps schools to cut the expenditure of buying old software and setting-up data centres, it is also possible to use "MOOC (massive open-online courses)" to support teachers and students to learn and prepare with the latest information in the most remote areas. Government programs such as the "SWAYAM (Study webs of active learning for young aspiring minds)," have allowed all people, and in particular teachers and students, to provide learning materials. Cloud computing is the only way.

Let's look at several other aspects in which AI provides the much-needed changes in the education system:

1) AI-based Hyper-personalization

Every child has different capabilities to learn. All children deserve the opportunity to learn to use their strengths to help them overcome their weaknesses. It is not possible for a teacher to adapt different teaching style for every child. This is not feasible because there are many limitation faced by him such as large classrooms, limited school timing system, and other resources. But with the help of AI, it is easy to understand each child's strengths and weaknesses in learning and adapt the learning pace to suit their needs.

Artificial intelligence is used to customized and personalize the learning of each student. Using the power of machine-based hyper-personalization, Artificial intelligence systems are used to develop each student's customized learning profile and to customize study materials for each student based on their skill-sets, preferred learning style and experience. For example, Content Technologies Inc. makes software named Cram101, which uses Artificial Intelligence to help circulate and simplify text-book matter into a comprehensible "smart" lesson plan that comprises summaries of chapters, true-false, and MCQs practice tests, and flashcards.

The AI capability is projected to permit a 47% increase in teaching management tools by 2024. Instead of force educators to develop a standardized syllabus for all learners, teachers would have broadened literacy support, offering a comprehensive of resources that integrate the same core curriculum but satisfy the distinct needs of every student. These AI-enabled e-learning platforms will have a market size of more than $6 trillion by 2024.

2) AI as a supporting Tutor

Many teachers are very incapable of determining which teaching strategies would resonate with most of their students with the help of AI. It was assumed that machines cannot take place of a human teacher is now not prevailing, the destiny would possibly see extra college students being tutored with the aid of using tutors who best exist in zeros and others. Some AI-primarily based totally tutoring structures exist already and might assist college students with primary mathematics, writing and different subjects. Such technology can train college student's basics, however up to now they are now no longer suitable to assisting college students study high-stage questioning and imagination, something that instructors with inside the actual international frequently want to encourage.

And this shouldn't rule out the possibility that AI tutors will do such things in the future. For example, software named 'Mika', combination of cognitive science and AI technology developed by Carnegie Learning help in customized tutoring and instant response to graduate students, particularly incoming fresher who would need educative classes.

3) Automated/ Computerized Grading

Grading exams and examination papers are boring and time-consuming, and AI-enabled programs will auto-grade various types of questions such as essays, long-form answers, and not just multiple-choice. It will save teachers a huge amount of time and would use it to communicate with students. Throughout the grading point, AI will minimize waste of time and resources as it helps each learner to develop how they perform in real-time from both the viewpoint of skill level and expertise. Such vital knowledge will inspire students to work harder when they see a final score, instead of at the end, and it is too late to do something. The example for the same In USA, University of California Berkeley designed a system, called Grade Scope, to help the teachers to mark essays faster.

4) Providing Actionable Feedback to the Teachers

A teacher can't assess the learning differences of the child in a standardized, pen, and paper test. The instructor can only tell whether or not the child has grasped the idea which he had studied. However, the child may have existing deficiencies in the learning of similar concepts that may impede his / her ability to learn a new concept. With AI, teachers can receive reliable actionable data on student success, and can thus get the guidance they need to succeed. Educators and teachers have

struggled for decades to develop a course or teach a skill that aligns with all, as we all have different degrees and different levels of intelligence.

There are infinite permutations and variations of teaching mediums to use — audio, visual, kinaesthetic. In short, tailoring every student's education is a monumental challenge that requires enormous time and human resources, which is difficult. AI is a device, however, that can make those barriers a thing of the past. Not only does AI helps teachers and students to develop lessons that are designed to meet the needs, but can also provide feedback on both the growth of the course overall. Some schools use AI software to track student growth and to alert teachers when there is an issue with their performance. For example, the iTalk2Learn system16, a program developed and evaluated by Carnegie Mellon University (a foreign university) to determine its impact on learning fractions of young students, implemented a learner model that specifically included details about an individual's knowledge of mathematics, cognitive needs, emotional state, as well as the input obtained and responses from the learners in turn.

5) AI is helping teachers to improve teaching techniques

For all students, one teaching method cannot be acceptable. To help students understand different concepts, teachers should know how students react to various techniques and which approach is more successful. One strategy that may be useful in teaching one idea may not be appropriate for another. By offering input, AI will help teachers solve the problem.

AI will track the performance of the batch in a quiz or study, and provide a thorough analysis of the performance of the batch for different topics and topics. Teachers know precisely how individuals respond with this input to a specific technique. AI will track the performance of the batch in a quiz or study, and provide a thorough analysis of the performance of the batch for different subjects and topics. The teachers should know precisely that how pupils react to a particular method with the aid of this input. For example, the teacher can be alerted by the Coursera platform if several students choose incorrect answers to a given question. As a result, the teacher has an opportunity to heed the requested topic. Over time, teachers will come up with a better plan to teach the students with ample input from AI. An additional benefit of this program is that when students are not capable to understand the concepts, then teachers can help those students in understanding the concepts individually.

6) AI as Voice assistant

Also, voice assistants in the classroom are being developed for teachers. Voice assistants such as Alexa and google assistant, Apple Siri, and Cortana will connect to educational content without the involvement of a teacher. Such tools may be used at home or in similar non-educational environments to provide interactional guidance and encouragement for the learning content. Arizona State University, for example, uses Alexa for routine needs on the campus. The assistant may answer common questions or follow the schedule of the student.

Universities and colleges are providing voice assistants to students in the higher education setting, rather than commonly printed student booklets or tough-to-navigate websites for helping with a variety of campus-related knowledge needs. Such voice assistants may help address common questions regarding campus needs and also be personalized to the individual schedule and courses of each student. It significantly eliminates the need for internal help and decreases the expense of

costly college handbook printing which could get out of date easily.

7) AI helps in Administrative works

Administrators in education are now reaping the advantages in Artificial Intelligence with administrative work by using smart assistants to help with a variety of organizational requirements comprising budgeting, student applications, and registration, course management, Human Resource related problems for educators, ordering and procurement operations, cost control, and facilities management. Use smart Artificial Intelligence-based systems will significantly boost the productivity of many educational institutions, lower their operational costs, give them greater reflectiveness of income and expenditures, and enhance the overall responsiveness of the education systems.

College admissions officials seem to use Artificial Intelligence programs to enhance the equity and efficiency in the admissions process. Artificial intelligence systems that are programmed in a manner that removes most of the individual's favouring are beginning to be used to provide accurate and rational admission using a given criterion as contrasted with humans. Recent college admission controversies have improved transparency and regulation of admission procedures. Recently colleges are using machine learning models which help in managing new admissions in an organized way and it is also proving very fruitful. Lots of Indian universities are now taking the help of AI in online admissions, certificate issuing, etc.

8) Supporting teachers with organizational responsibilities

Aside from teaching, teachers also have to maintain the environment in the classroom and perform various organizational activities. Teachers also have other non-teaching activities such as paper evaluation, marking of examinations, categorizing proper documents, Human Resource and personnel related problems, procuring and maintaining classroom materials, arrangement and handling school tours, replying to parents, dealing with sick or otherwise absent students, and others.

Many educators expend as much as 50 percent of their time on other than teaching activities. Artificial Intelligence-based systems are particularly useful in handling these non-teaching tasks. Such Artificial Intelligence-based systems can help with scoring activities and deliver the students with customized answers. Regular and periodic paperwork, managing matters linked with scheduling, and further administrative concerns can also be achieved. With the help of AI system, teachers can concentrate on the special requirement which need personal communication with students.

9) AI making online exams more secure

Remote Proctoring is the newest technology to simplify the examination monitoring method. Students may appear from any classroom / home for examination. Using remote Proctoring, the system can invigilate such an exam remotely.

This helps distant students to do so with a webcam connected to the Computer System. Many educational institutions, companies and universities have begun to simplify examination processes through remote protocoling. In the pandemic of coronavirus, One of the first Indian institutes to have performed examination from home is the Indian Institute of Management (IIM).OP Jindal Global University, in addition to Delhi Technical University, which is planning to conduct its examinations via online method, has announced its entrance examinations through AI-proctoring.

10) Helpful in Evaluating Answer-sheets

Physical Answers sheet assessment is one of the sources of discomfort for university or educational institutions. Most organizations switch towards an on-screen assessment method because it is smart and the score auto-calculates. It also helps to ensure that all pages of the answer sheet have been truly verified by the examiner. This also saves administrative costs to manage actual answering papers. It can help you automate the processing of data. Some Indian institutions are already working on it. Recently, Professor Rao, IIT Delhi said on this, "We are evaluating and will probably start something on a trial basis next semester for internal evaluation."

11) Helpful in Real-Time text to speech and text translation

This can be used to easily spread information in the local languages, in line with the 2019 Draft National Education Policy, which has promoted the learning of the mother tongue. For example, if an E-PATHSHALA textbook is only accessible in Hindi, then text translation services can make it available in other regional languages and make it more accessible. Because of all these language translation programs, the language barrier could be overcome, and teacher integration across states could be attained, helping to meet the demand better than before. For example, in this pandemic when students are not able to go to their institutions, Presentation Translator add-ins helps them by translating what the instructor says in real time. This also creates opportunities for students who want to learn new subject, which is not offered by their institution.

12) Supervised classification models to minimize drop-out levels

If AI systems offer personalized feedback, we can reduce all India drop-out rates that are 4 per cent at the primary level but it grows up to 20 per cent in higher education. While these customized tutors continue to gather data points at each juncture of the child's educational path, classification ML models could be used to identify the children at risk of dropping out and proper resolution mechanisms could be placed in place. A continuation of these measures will support a ratio of enrolment in higher education and ensure that a large proportion of adults attain literacy, mandates in line with the goals set under this SDG.

Conclusion:

Artificial Intelligence is dominating every sector in the present era. Artificial Intelligence will soon be the vibes of future that will affect and makes positive contribution the world education sector. AI would offer the size, at a reasonable cost and without the need of an approximately equal workforce, to provide high-quality education across the country. So, this would be welcomed by all stakeholders because it would have a substantial long-term impact on the position of our country in the digital and globalized world.

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HIGHER EDUCATION EFFECTIVENESS THROUGH INSTRUMENTAL AND TERMINAL VALUES IN STUDENTS

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Abstract

The Government of India aims to achieve reach , equity, quality and merit, applicability and value based education in all education systems Primary , Secondary and Tertiary .Different definitions of Organizational Culture were found during literature review in (Khanna, 2017) , (Gupta) 's Schein Model and (Greenfield & A.Brown) and comparisons were done .

Statement of the Problem-The paper highlights the impact of missing values in people through the findings of (PwC, 2018) and (EY, 2018) etc.The (PwC, 2018) states that 49% of international organizations are a victim of deceit and economic violation and fighting fraud has become a core business issue .The (EY, 2018) highlights that 11% of the companies have experienced significant deceits in last 2 years and 38 % of respondents felt that bribery/corrupt practices occur widely in business in their country .The Rajasthan state crime statistics reveal that missing values are a threat to organizations and to society . Hence effectiveness which is the ratio of actual outcome to ideal outcome is questioned from Higher Education perspective where the ideal outcome is instilled values in students .While exploring values variation in value definitions was also observed across different organizations which may be because of etymology or different focus areas of different organizations .

Objectives -1.To find the instrumental values and terminal values which are expected to be present in prospective employees in maximum number of organizations employing MBA students from Rajasthan 2.To find the instrumental values and terminal values which are expected to be present in maximum number of universities located within Rajasthan having MBA programme .3. To find whether there is an significant inequality between the proportion of Instrumental and Terminal values in a)Universities b)Employing Organizations .4 a) To find whether there is a significant inequality in proportion of instrumental values of Universities and Employers b) To find whether there is a significant inequality in proportion of terminal values of Universities and Employers .

Methodology- 33 employers from different employment sectors like Healthcare , Beauty and Wellness, Banking Financial Services and Insurance etc .and 33 Universities located within Rajasthan of different types (Private , Deemed ,State, Central) were selected randomly .The research design is exploratory as based on secondary data obtained from the websites of the organizations under study and descriptive as opinion of people was sought about values and their categorization in "instrumental","terminal"&"instrumental and terminal ". (K.Malhotra & Dash).The research type is descriptive as it describes values of employing organizations and universities and uses logic to categorize values as terminal (End goal)and instrumental (Behavioural means) based on their present day definitions .

Analysis – The test of proportion for large samples was applied to find out the results of formulated hypothesis .

Findings –1.There was no significant inequality observed between proportion of instrumental and terminal values in a)Universities b)Employers .2.However a significant inequality is observed in proportion of instrumental values between Universities and Employers .3.Same holds true for proportion of Terminal values between Universities and Employers**.** 4.The behavioral and goal oriented trainings are essential irrespective of the emergence of technology led disruptions ,automation , new pedagogies and new skill set requirements .

Keywords : Organization Culture, Organizational Climate, ISO 9001: Quality Management Systems, Instrumental and Terminal Values, Placement Strategy.

Introduction

The importance of values has increased in each and every organization these days . According to (PwC, 2018) 49% of global organizations reported that they'd been a victim of deceit and economic violation as reported rate of economic breach is on the rise in all organizations and across the territories as shown below .
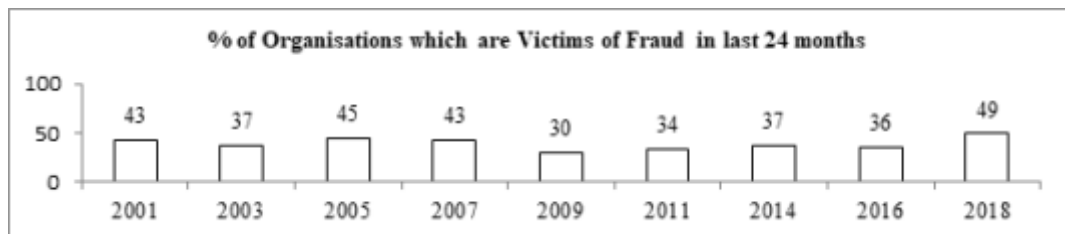

Figure 1: Percentage of Organizations which are victims of fraud in last 24 months (PwC, 2018)
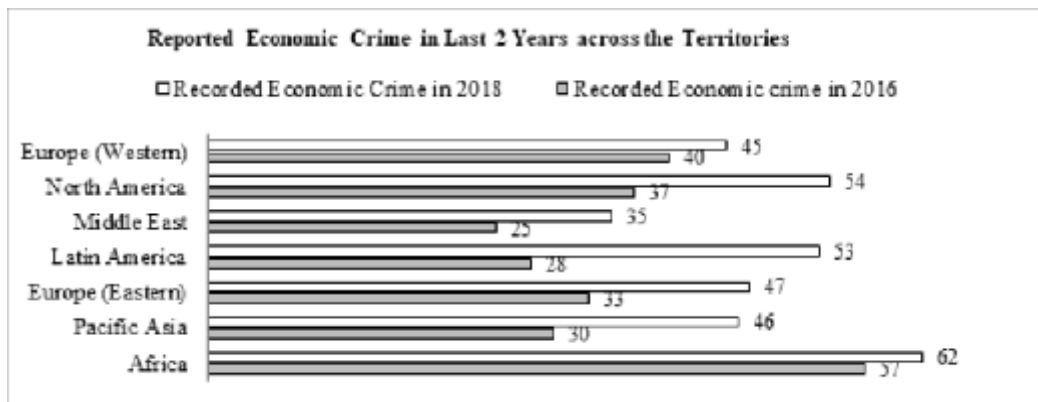

Figure 2: Reported Economic Crime across the territories in last 2 years (PwC, 2018)

The above figures are alarming and bring the attention to the values instilled in students during their primary , secondary or tertiary level education and their sustenance in further stages of life .A value not lived is a behavioral failure or defect in a person .According to (Systems) defects should always be caught closer to the origin of failure in order to protect an organization from bigger mishaps and it should have processes which prohibits value failures and detects them as early as possible .Values can be imagined as the mistake proofing control lines which stop the person from crossing ethical

boundaries as shown in the figure 4 below .

Figure 3: Terminal and Instrumental Values (google images)
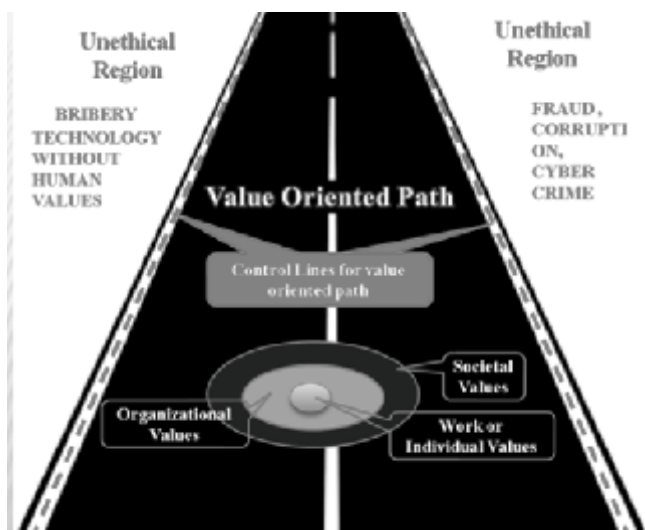
Figure 4: Value driven and unethical path

The control lines shown in above figure are similar to the control chart which Walter A.Shewart invented and which was used as a preventive tool to map deviations in any process which had attained stability (Machine and Process Capability) .As soon as such process goes out of control it acted as an alarm and actions could be taken on man , machine , material , method or environment after finding the assignable cause for deviations .
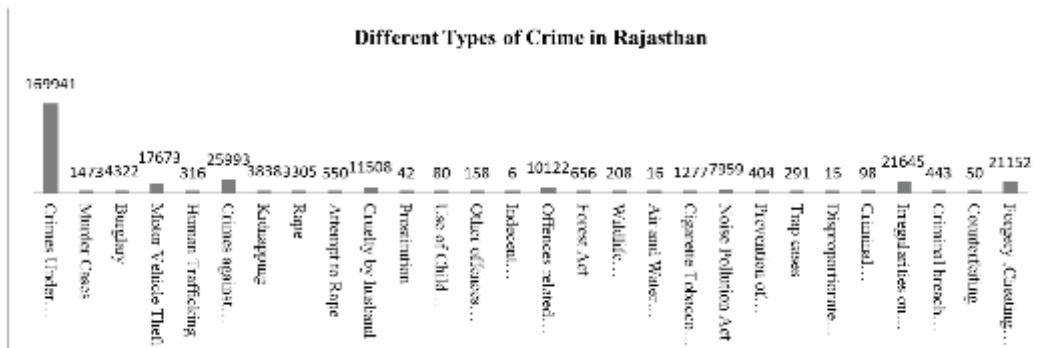
Figure 5: Types of Crime in number in Rajasthan State (Network, 2019)

One of the social indicators of values being lived in society is the crime rate in society .The rise in crime shows that values are dying and it's reduction is a positive indicator .In figure 5 above the Rajasthan state statistics reveal that the number of criminal cases registered have increased from 71032 in 2017 to 85186 in 2019 (Rajasthan Patrika, 2018) .

Review of Literature

2.1 Values

Values that characterize a society are societal values ,an organization are organizational values and distinctive of an individual are individual values .They are generally acceptable to the society as a whole or a section of society as preferred modes of conduct and help in making judgment and choices about goals and ways to attain goals . (Khanna, 2017)

Organizational Core values are firmly established inherent principles which are too important and valuable to be changed , serve as a vital part that guide company's actions and practices and that can't be compromised for convenience and short term economic gain. Values interact with each other and form systems and conceptual frameworks like Hofstede and Rokeach frameworks . (Khanna, 2017)

Rokeach categorized values as terminal (what is to be achieved that is the goal /desired end state) and instrumental (the means or the choice of behavior in achieving the goal) .

Table 1: Rokeach Framework (Khanna, 2017)

Rokeach Framework	
"Terminal Values"	"Instrumental Values"
"A comfortable life"	"Ambition"
"An exciting life"	"Extensive mind"
"Equality"	"Capable"
"Family security"	"Self controlled"
"Freedom"	"Clean"
"Health"	"Courageous"
"Inner harmony"	"Forgiving"
"Mature love"	"Helpful"
"National security"	"Honest"
"Pleasure"	"Imaginative"
"Salvation"	"Independent"
"Self respect"	"Intellectual"
"A sense of accomplishment"	"Logical"
"Social recognition"	"Loving"
"True friendship"	"Loyal"
"Wisdom"	"Obedient"
"Peaceful world"	"Polite"
"Beautiful world"	"Responsible"

Organization Culture

Different definitions of Organizational Culture were found during literature review .According to (Khanna, 2017) there are 3 levels , the starting level represents the **core values** , the next level represents the Organizational Climate cumulatively and the third level cumulatively represents the Organizational Culture as represented in figure 6 below .The book (Gupta) introduced the Schein Model in which artifacts represent the top level of the Organizational Culture followed by the **values** and then the basic assumptions which pave way for the perceptions of people as shown in figure 7 below .The third book (Greenfield & A.Brown) states that culture consists of ways of thinking , **values** , behavioral criteria and anticipations shared by organization members .
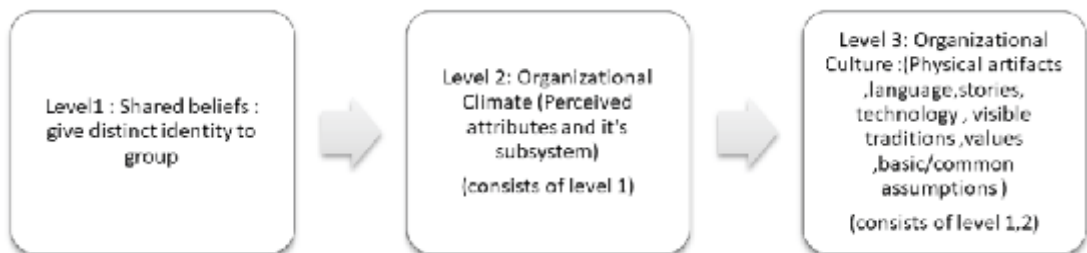
Figure 6: Values , Organizational Climate and Organizational Culture (Khanna, 2017)

Figure 7: Schein model showing levels of Organization Culture

All the 3 definitions have values in common and there is a possibility that the transition of a student from the university /institute to the employing organization is very easy if university /institute and employing organization have same values .There will be cultural similarity between organizations if values are similar and the chances of value failures might be also lower than other organizations having different values .

Research Methodology

Research Design : Secondary data is used so it is exploratory & primary data is used to categorize values so it is a descriptive research design as well (K.Malhotra & Dash)

Research Type : Classifying based on objectives the research is descriptive research and exploratory research as it describes values of employing organizations and universities and explores their category .

Sampling –Simple Random Sampling for Secondary Data from websites

1.The sectors defined in (Entrepreneurship, 2015) were taken and 33 employers from these sectors were selected who employ MBA candidates but overlapping was observed between sectors like Handloom and Textiles ,Healthcare and Retail etc and their values were mapped from their website .

2.The 33 Universities of Rajasthan were selected from (Private , Deemed , State ,Central) which are having MBA programme and their values were picked from their website for similarity analysis .

3.Non random quota type of sampling was used to find people understanding on categorization of values in "Instrumental","Terminal"& "Instrumental & Terminal" and 43 faculties/research scholars participated .The sampling frame was restricted to the people who registered for Online FDP on

Universal Human Values conducted by NIT Patna . (Patna, 2020)

Data Analysis Findings

1. In case of Universities 67 % did not define values and in case of Employers 3% did not define values .This shows that employers are very much aware about what they expect from the employees but students are not aware about their right to demand to instill values in them as customers of university education .
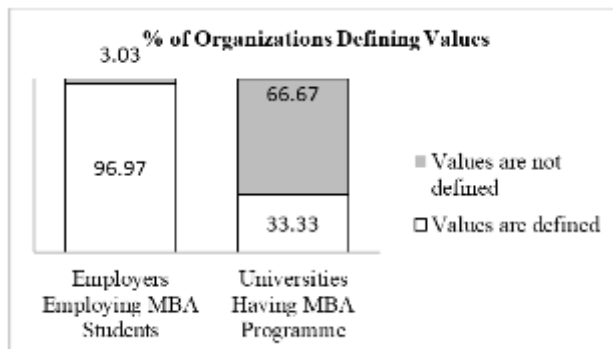
Figure 6: % of Organizations Defining Values

(Source : Websites of employers and universities)

2.Some organizations have **defined the values and then given their own definition** to values and 57.58

% of Employers have done so and only 3.03 % of Universities have done the same .
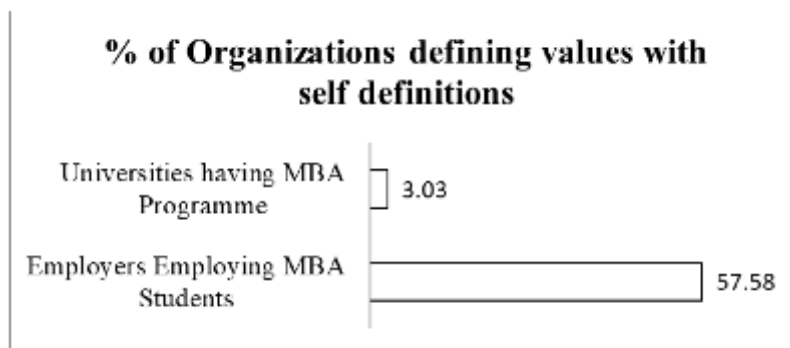
Figure 7 : Percentage of Organizations defining values with self definitions

(Source : Websites of employers and universities)

3.The number of employers chosen from different sectors for value mapping are shown below .

Figure 8: Number of Employers from different sectors

4. The number of universities of different types chosen for value mapping are shown below .

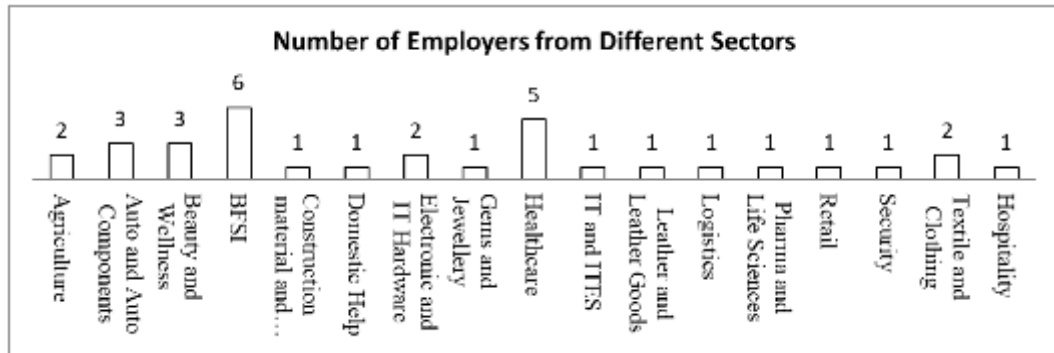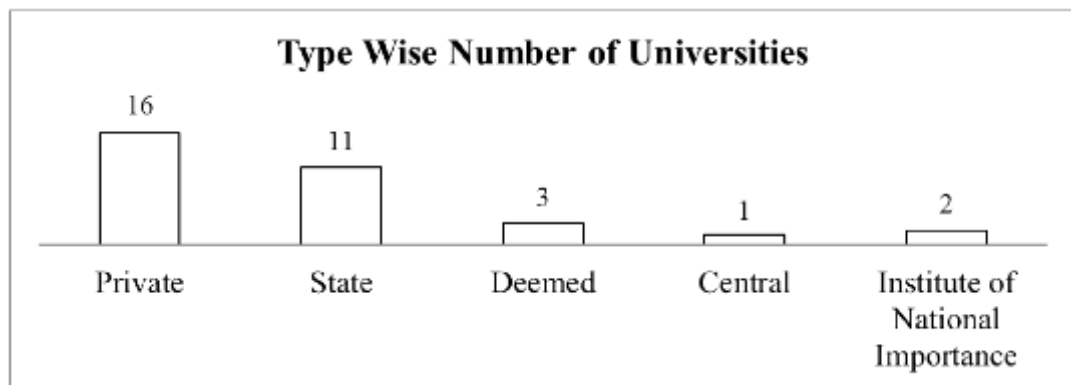**Figure 9: Type Wise Number of Universities**

5. Values according to (Hawker, 2014) mean "standards of behaviour ".

6. Values like integrity have more than one definition .It means combination of goodness , fairness and honesty according to (Hawker, 2014) and "doing the right thing even when no one is watching " according to (Lewis).

7. The meaning of any word depends on the usage of the word in a sentence . A word used as a noun may have a different meaning than when it is used as a verb or adjective .The values which are stated as a word and not defined in the form of a sentence can take up any meaning as noun /adjective/verb while the values which are defined in the sentence form are either nouns/adjectives/verbs based on their usage in the sentence .eg :"Creative" is an adjective and states use of imagination to create something and "create value" is the sentence where create is used as a verb and means bringing into existence or causing something to happen .

8. The fault in writing style known as **Tautology** (Oxford, 2019) was observed in employer and university values where **words conveying same meaning were written more than once**. Eg:The organization VLCC (About us-Core Values) has mentioned positive regard and respect both as a value .However according to (Oxford, 2019) regard means high opinion as well as respect .

9. The (Home-Profile-Values) has specified **values** and **culture** separately which shows that the

understanding of culture is different from the one which was found during literature review in (Greenfield & A.Brown) (Khanna, 2017) (Gupta).The values of the company are "**highest priority to customer requirements ,high standards of public conduct and transparency in operations"** .The culture of the company is "courtesy and **caring ,initiatives and innovation and integrity , trustworthiness and reliability" .**

10.The values listed by the organizations are a combination of terminal and instrumental values as some aim at what is to be attained and some act as means for achieving the goals . (Khanna, 2017)

11.There are 4 types of organizations possible with the accomplishment and non accomplishment of terminal values and the practice and non-practice of instrumental values which are shown in the window below .

	Terminal values are achieved	Terminal values are not achieved
Value Oriented Path is adhered (Instrumental Values are practiced)	**Ethics maintained and Profits achieved and hence sustenance**	Ethics maintained but no Profits and hence no sustenance
Value Oriented Path is not adhered (Instrumental Values are not practiced)	Unethical practices but Profits achieved and hence long term sustenance is a question	No ethics , no profits hence No sustenance

12.The values which relate to people are instrumental as they are related to behavioral aspects and the values which are related to product /organization / person are terminal in nature as those are the expected outcomes in form of functional features of the product/goals of organization & individuals .eg: Product leadership means that the product should be the best in serving the purpose for which it is meant and has a hold on market .Leadership is a combination of qualities which people should possess described differently by different people to deliver best outcomes .Examples of values classified as instrumental , terminal and instrumental as well as terminal are shown in table below .Etymology is an account of the origins and the developments in meaning of a word (Oxford, 2019) and because of these developments the meanings of words have evolved .Oxford Dictionary is updated and printed every 4-8 years. It is a challenge for the authors to update the dictionary including the meanings based on usage from all disciplines.

Table 2: Some Examples of Instrumental values ,Terminal values and values which fall in both category " Instrumental and Terminal "

Instrumental	Terminal	Instrumental & Terminal
Empathy	Efficiency ((output/input)/Efficient (timely completion of a task/less wastage of money and effort)	Customer/Stakeholder/People/ Client/Society Focus / Customer first (first priority)
Integrity (goodness ,fairness, honesty)	Effectiveness (Actual /Ideal output)	Responsibility (Social),(Environmental)
Honesty	Excellence/Academic Excellence (very good /outstanding)	Trust (Earning trust/trusting others)
Fairness	Growth/Community Growth/Growth in all areas/Profitable Growth	Respect (Earning respect /respecting others)
Creative/Imaginative	Create	Transparency (not hiding anything)/ Open / Openness (freedom of expression and thoughts , open to new ideas)
Ethical/Principled/ High standards of public conduct/ Corporate citizenship behavior	Innovation	Creating standards / Adhering standards
Teamwork/Cooperation/ Collaboration	Maintain	Commitment (giving your time /energy & keeping promises)
Team spirit (keeping organizational/team/group goals ahead of individual goals)	Professionalism (Having the desired competency attained through a formal training to do a task) /Skilled	Safety/Security (Following safe practices is a behavioral trait /Safety is also a desired state of existence /Security (protection from danger or threat) is a broader term where threats from competition are also considered)
Discipline	Reliability(to serve intended function over the expected life time) / becoming trustworthy (believable)	Sustainability (avoiding using up natural resources is a strategy and is an example of environmental consciousness), Synonym- Endure (being able to last long in pain and difficult times)
	Development(Product / Relationships)	Leadership (a combination of qualities defined differently by different people / Situational Leadership
	Process Approach	Quality
	Improvement (Continuous , Constant, Continual)	
	Success/Student success	
	Co-prosperity/prosper	

13.The values stated by the organizations are either broad or narrow .Some treat all stakeholders equally by writing society focus ,people focus ,some focus on vendors , employees and customers and some only at customers .However , focus on any stakeholder is categorized as terminal and instrumental value both as it is concerned with achieving results related to the concerned stakeholder

hence terminal and also incorporating activities in daily work which are stakeholder oriented and hence instrumental .

Figure 10: Stakeholders in an organization

14.Organizations like Infosys have emphasized on improvements of deliverables (products, services) and team and organizational improvement . The variation in improvement type is of 3 types continual, continuous and constant. Continual improvement needs time for stabilization and continuous improvement is a myth according to (Mathur, 2009) .Continuous improvement is a small step improvement which occurs by initiating changes almost daily .

15. The term exceeding expectations and going beyond the call of duty is used by Fortis Escorts to define ownership and innovation. Exceeding expectations of customers is called customer delight and when employees exceed expectations of the organization it is called employee engagement.

16. Infosys (About us- Values) wants to be objective and Fortis Escorts (Home-Our values) respects the different opinions of different people .

17.Bank of Baroda (Human Resources-Our Core Values)and Sun Pharmaceutical Industries Ltd. (Home-About us-Vision & Values) aim at system as well as process improvement but Mother Dairy (Home-About-Values) gives more importance to deriving greater value from it's processes .Process approach **strengthens internal customer concept** according to (Mathur, 2009) through **customer focus** and requires **flatter organizations** .

18. The 5 levels of documents linked to ISO 9001:2000 as per (Mathur, 2009) are shown below .Organizations like Infosys and OM Logistics focus on setting standards related to business .Dell aims at an exceptional standard of excellence and performance, Tanishq aims at a quality standard , DCM at an ethical and Volkswagon aims at a "doing it right " standard .Mahindra and Bank of Baroda are focusing on their policies which is level 2 documentation.
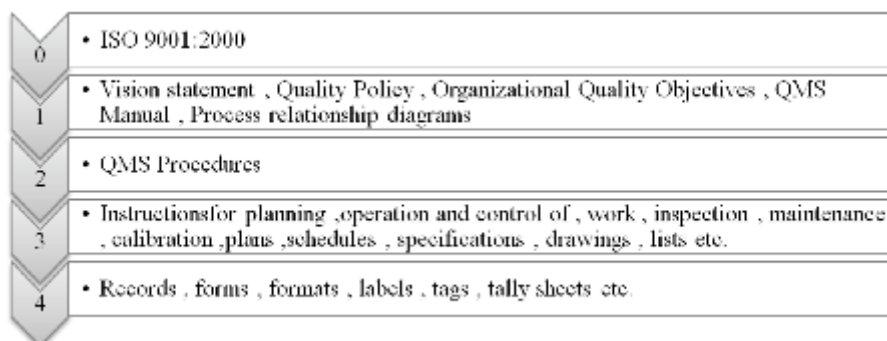
Figure 11: 5 levels of documents linked to ISO 9001 :2000 (Mathur, 2009)

Hypothesis Testing and Findings

Table 3: Hypothesis and Statistical Tests

S.No.	Hypothesis	Description (Ho and Ha)	Statistical Test
1 & 2	Ho	It is believed that there is no significant inequality in proportion of instrumental values and terminal values within a)Universities having MBA Programme b)Organizations employing MBA students	Test of Proportions
	Ha	It is believed that there is a significant inequality in proportion of instrumental values and terminal values within a)Universities having MBA Programme b)Organizations employing MBA students	(I.Levin, S.Rubin, Rastogi, & Siddiqui, 2012)
3	Ho	It is believed that there is no significant inequality in proportion of instrumental values between Organizations employing MBA students and Universities having MBA Programme .	Test of Proportions
	Ha	It is believed that there is a significant inequality in proportion of the instrumental values of Organizations employing MBA students and Universities having MBA Programme .	(I.Levin, S.Rubin, Rastogi, & Siddiqui, 2012)
4	Ho	It is believed that there is no significant inequality in proportion of terminal values between Organizations employing MBA students and Universities having MBA Programme .	Test of Proportions
	Ha	It is believed that there is a significant inequality in proportion of terminal values between Organizations employing MBA students and Universities having MBA Programme .	(I.Levin, S.Rubin, Rastogi, & Siddiqui, 2012)

Table 4: Hypothesis Results

S. No	Instrumental Values in Universities	Terminal Values in Universities	Instrumental Values in Employing Organizations	Terminal Values in Employing Organizations
1	Integrity	Excellence	Customer Focus	Customer Focus
2	Quality	Quality	Trust	Innovation
3	Transparency Responsibility Respect Ethics/Ethical Behaviour Customer Focus (Student/Patient)	Transparency	Respect/ Regard	Trust/Faith
4	Teamwork Environmental Consciousness Character Trust Success/ Flourishment Inclusion	Responsibility	Ethical/ Principled Transparency Efforts/ Actions/ Pursuit/ will	Excellence
5		Trust / Accountability/ Lifelong Learning/ Continuous Improvement/ Customer Focus/ Environmental Consciousness/ Inclusion/ Longterm (Lifelong)	Commitment Standards (Business/ Ethical/ Quality/ Do it Right/ Performance & Excellence) Passion/Enthusiasm	Respect
6			Integrity	Transparency / (Execute or Do)

Conclusion

1.The values which are stated by maximum number of employers and universities are stated below –

Table 5 Top 6 instrumental and Terminal Values in Universities and Employers of MBA Students (Home-Our values) (Home-About SDMH) (About the Company-Company Overview-Values-the way we do things) (Home-About us-Vision and Values) (About Us-Vision Mission Values) (About Mahindra Company) (About us- Values) (Home-Our Company-) (Home-Overview-About Us-Our Values) (Corporate Bajaj Finserv Brand Identity) (About us-Values) (Home-Profile-Values) (About us-Values & Purpose) (Why Go Galpin-Our Core Values) (About-About us) (About-About us-Our company-Values) (Human Resources-Our Core Values) (About us-Core Values) (Vision & Mission) (Strategic Intent-Values) (Work-Service Social Programs-International Association For Human Values) (About us-vision-philosophy-samsung's spirit) (Dell Technologies-Corporate- About us-Who we are-Code of Conduct) (Home-About us-Vision & Values) (Vision Mission & Our Values) (Godrej.com-Godrej & Boyce-Security Solutions-About us) (Home-Careers-Values) (Home-About-Values) (Our Brands- Zara) (Home-About us-Mission) (Home-About us-Values) (About-

Mission,Vision & Values) (Home-Investors-Code of Conduct) (Home-About us-Vision,Mission & Core Values) (About us-Mission & Vision) (About us-University Profile-Vision,Mission & Core Values) (About us-Vision,Mission & Values) (Home-Mission) (Home-About-IIS-The-University-Vision, Mission, Goals) (About us-Vision & Mission) (Home-About-Vision,Mission,Values) (Home-About us-Vision,Mission & the Spirit of JU) (About us-Schools-Education) (Home-Vision & Mission) (About us-Mission & Vision) (Home-About-Our Mission-Core Values and Culture) (Know about us-Principles & Objectives) (About University-Vision & Mission, 2019) (About SPSU-Vision & Mission) (Home-About us-Vision) (Home-About SKD-About) (Home-About-Vision & Mission) (Home-Institute-About) (Home-About us- Vision & Mission) (Home-Vision & Mission) (Home-About us-About University-Mission & Vision) (Home-About us- About University-Vision & Mission) (Home-About-Vision & Mission) (About SKRAU-Teachers & Officers Service & Conduct Rules) (About us-now UOT-Vision & Mission) (Home-About) (Home-About Us-Our Vision And Mission) (About us) (Home-About University-Vision & Mission) (Home-About Us-Who we are-Vision & Mission).

Table 6: Testing Hypothesis 1 and 2

Difference in Proportion of Instrumental and Terminal Values of	Proportion of Instrumental Value (p1)	Proportion of Terminal Value(p2)	p1-p2	Weighted Proportion (pbar)=(n1p1+ n2p2)/ (n1+n2)	Standard Error (sqrt(pbar *qbar (1/n1+1/n2))	Z	Z value from table	Null Hypothesis (Accepted/ Rejected)	Difference is significant (Yes/No)
Organizations employing MBA students	0.303	0.3177	-0.015	0.3145	0.01989841	-0.738369469	1.96	Accepted	No
Universities having MBA programme	0.06	0.08	-0.017	0.0675	0.010751197	-1.537403317	1.96	Accepted	No

2a) There is no significant inequality observed in the instrumental and terminal values of Employing Organizations .

2b) There is no significant inequality observed in the instrumental and terminal values of the Universities having MBA programme.

This concludes that employing organizations and universities both focus equally at instrumental values and terminal values if proportion of values is considered as a measure of importance .

Table 7: Testing Hypothesis 2

Difference in Proportion of Instrumental Values between	Proportion of Instrumental Value (p1)	Proportion of Terminal Value(p2)	p1-p2	Weighted Proportion (pbar)=(n1p1+n2p2)/(n1+n2)	Standard Error (sqrt(pbar *qbar (1/n1+1/n2))	Z	Z value from table	Null Hypothesis (Accepted/ Rejected)	Difference is significant (Yes/No)
Universities teaching MBA and MBA student Employers	0.3030	0.0597	0.2433	0.1814	0.016512674	14.7367 1187	1.96	Rejected	Yes

There is a significant inequality observed in the proportion of Instrumental values between the Universities having MBA programme and Organizations employing MBA students. Most of the Universities lag behind in defining Instrumental values .

Table 8: Testing Hypothesis 3

Difference in Proportion of Terminal Values between	Proportion of Instrumental Value (p1)	Proportion of Terminal Value (p2)	p1-p2	Weighted Proportion (pbar)=(n1p1+n2p2)/ (n1+n2)	Standard Error (sqrt(pbar *qbar (1/n1+1/n2))	Z	Z value from table	Null Hypothesis (Accepted/ Rejected)	Difference is significant (Yes/No)
Universities teaching MBA and MBA student Employers	0.3177	0.0762	0.2415	0.1589	0.015665489	15.416 43308	1.96	Rejected	Yes

There is a significant difference observed in the proportion of Terminal values between the Universities having MBA programme and Organizations employing MBA students. Most of the Universities lag behind in defining Terminal values .

Not defining values results in lack of clarity in terms of what kind of behavioural changes are expected in students undergoing education.

5. Instrumental values can be considered as the **Behavioral requirements** and Terminal values can be considered as a part of the **Competency** required in a probable employee .These are explicitly stated on website and are the significant part of their culture .These can be termed as "voice of the customer " for an educational institute as these are the **implicit knowledge requirements** in any probable employee of any organization .eg: An organization stating Quality as a terminal value will prefer employing people who have the knowledge of Quality Methods and Tools .

6.Terminal & Instrumental values can act as a strong input **for designing the training calendar for placement preparation**. Instrumental values training may include behavioural trainings.The

Training module for terminal values like Quality , Sustainability , Environmental Consciousness ,Excellence , Innovation , Improvement can be designed which may include the following topics .A proper curriculum can be designed and finalized by discussing with the employers and other stakeholders after taking their requirements (Voice of the customer) (Dale H.Besterfield) as done during Quality Function Deployment .Memorandum of Understanding can be signed with employers after designing the curriculum based on implicit requirements in form of stated values .

S.No	Value	Topics student should be aware of
1	Quality	TQM Concepts, ISO 9001
2	Environmental Consciousness	ISO 14001
3	Improvement (Constant, Continuous, Continual)	Kaizen , Breakthrough Improvement
4	Innovation	Preventive Action & Corrective Action , FMEA (Failure Mode Effect Analysis), Lifecycle Assessment
5	Excellence	PDCA (Plan do Check Act), RADAR
6	Sustainability	Reduce , Reuse , Recycle

7.The categorization in "Instrumental " , "Terminal " and " Instrumental and Terminal " values is done by the authors and in order to validate whether their understanding matches with others a survey was done where 43 people participated .The sampling was non random quota type sampling where sampling frame was the faculties and research scholars who registered for Faculty Development Program on Universal Human Values conducted by NIT Patna and the results clearly indicate the categorization of values as instrumental and terminal by Rokeach should be extended to 3 categories "Instrumental " , "Terminal"& "Instrumental & Terminal ". (Patna, 2020)The understanding of values vary in people and hence the categorization done by them also varies .
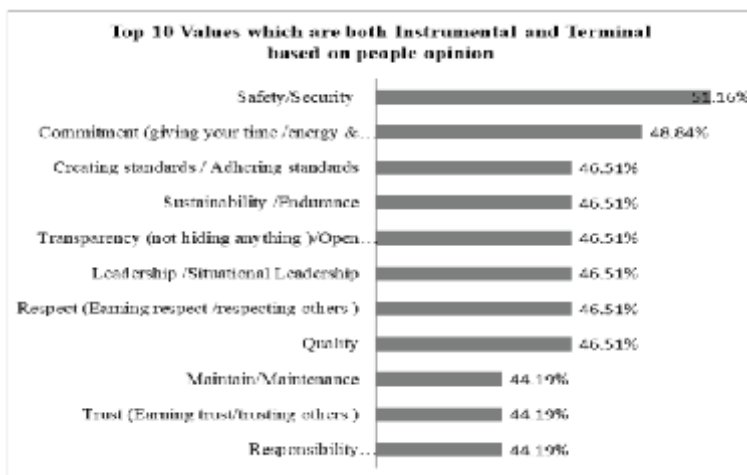
Figure 12: Top 10 Values which are both instrumental and terminal based on people perception (Joohi Chaturvedi)

Limitations

1.The study was limited to the chosen samples because of economic considerations and resource constraint .

Future Prospects

1.Research can be done in future on the mission and vision stated by different organizations and it's alignment with instrumental and terminal values .According to (L.Wheelen, Hunger, & Rangarajan) mission is the reason for an organization's existence stating what are it's offerings (products and services) to society .Vision describes the status that an organization aspires to achieve . The book (Mathur, 2009) states that vision statement of an organization is a futuristic aspiration of an organization which highlights it's high aims related to future .

2. Research can also be done on the instrumental values and their alignment with the code of conduct. The variation in the code of conduct for employees, customers, vendors can also be mapped .Only a few corporates have stated different code of conduct for different stakeholders.The major area for futuristic research can be how non-compliance to code of conduct is dealt with by different organizations and how non-compliance is measured and which internal mechanisms are available to discover non-compliance.

3. It will be interesting to know how universities are preparing students on the behavioral and knowledge oriented aspects and how students internalize these .

4.Research can be done to find whether students adjust easily in employing organizations if their university /institute values match with the values of employing organizations .

Acnowledgement

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POWERFUL: BUILDING A CULTURE OF FREEDOM AND RESPONSIBILITY

'**Powerful: Building a Culture of Freedom and Responsibility**' is indubitably a fantastic book, worth appreciation. The readers ought to express their gratitude to the author for writing an exceptionally practical book which attempts to demonstrate the different and novel methods and techniques of recruiting, motivating and creating great teams that go well with this fast paced, newfangled, nimble fanatical backdrop, we now find ourselves in. The outcome of techniques mentioned in the book is culture of 'Freedom & Responsibility' in the company. Patty McCord, the author of the book believes in the idea of team building and the same has been articulated very well in the book. McCord has taken the opportunity to bring out her fourteen years of experience as Chief Talent Officer at Netflix, where she contributed to the widely read Netflix Culture Deck and has very well explained the manner in which the company actually executed what was codified in the Culture Deck. The book is flooded with anecdotes and provides an insight into what it feels like to work for one of the most successful companies in this world. The book emphasizes and serves as a guide to create a culture and environment where people behave like adults and develop and exhibit humanistic values of truth, respect, discipline trust and integrity to be successful in this rapidly changing order of world. The author of the book has presented a blend of emotions, spreadsheets, data and stories which can help readers in inculcating a truly transformed culture wherein both the individuals and the company can grow in this era of data with highly competitive business environment. The book is written in an exceptionally simple and lucid language. Patty McCord, the author of the book has intended to reflect the true corporate culture and team building in an organization. Also, the manner of working in team and getting the work done has been very well expressed in the book.

Patty, in this book has made a swaying argument on why the companies operating in this new landscape of constant evolution and adaptation can't continue to operate with the old way of HR, if they want to genuinely flourish their business and deliver quality and benefits to customers. The author has attempted to press the readers to develop curiosity about everything and has also tried to encourage the managers to create an environment with a practice of extreme inquiring about everything. According to Patty, the main task of hiring manager is to create and develop great teams with the zeal and enthusiasm to help company achieve its set objectives and reach to the apex level. Moreover, with the example of Netflix the author intends to give insight on what it means to be agile by placing the notion of dexterity into the sphere of thinking and also how to have better human resources. The book written by Patty McCord is a powerful guide for executing the major tenets of adaptability, agility and resilience to develop the best possible teams which can deliver decisive goals of business and also help the company to be successful. Furthermore, the book has the capacity to leave its readers with the numerous questions to assist them in taking the responsibility to understand the business and customers and offer their best to both.

The book begins with introduction on a new way of working and consists of eight chapters:

In the introduction of the book the author has emphasized on fostering freedom and responsibility and has called it as a new way of working. Patty, the author of the book believes that people have power and one should not try to take that away. As, an alternative management method she stresses to manage people in the manner innovations are managed. The culture of the organization should provide them freedom and also develop discipline to understand their responsibility. The theme of the first chapter of the book, *'Powerful: Building a Culture of Freedom and Responsibility'* is based on treating people as adults. In this chapter the author highlights the mode of great team achievement and motivation and has recommends operating with minimum possible set of rules, approvals, policies and procedures because they impede agility and speed and she also emphasizes on constantly refining the culture. Proceeding to the second chapter titled, *'Every Single Employee Should Understand the Business'* the author talks about importance of genuine flow of two-way communication between the management and the employees and further, the author also firmly believes that a steady stream of communication is the lifeblood of competitive advantage. In the next chapter of the book, '*Humans Hate Being Lied to and Being Spun'* the author deliberates on the significance of being honest to the employees. She also emphasizes on the practice of giving critical feedback in such a manner that it is constructive and specific and is understood by employees as well-intentioned. '*Debate Vigorously'* is the title of the fourth chapter, which itself indicates the premise of this chapter, that is, open and intense debate should be encouraged in the organization and for that the terms of the debate should be set explicitly. The author in this chapter has attempts to bring out the rules, advantages and challenges of open debates in the organization. Patty McCord, the author of the book in the fifth chapter *Build the Company Now That You Want to be Then* very emphatically talks about hiring the people now for future need. Further, she insists on visualizing the business six months from the current period to get better performance. She advocates envisaging the people working with tools and skills that they possess and then without more ado execute the changes required to build that future. Along with this she also utters to have fewer people with more skills in the organization who are high performers and in case if they are not able to perform then it is not the job of the business to invest in their development rather the organization should focus on developing the product and market. She also believes in promoting and developing the people from within if it is the best option for performance, otherwise the organization should be proactive in hiring people from outside. The author of the book further accentuates that the people should take the charge of developing themselves as this results in optimal growth of both the company and the individual. Proceeding to the sixth chapter of the book '*Someone Really Smart in Every Job',* Patty McCord, the author of the book, attempts to bring out the basic tenets of the philosophy of talent management. The focal point of this chapter is to place the right person in every single position and the same was ensured at Netflix by following the principles akin to the responsibility of hiring great people should rest with the managers, the people hired should be appropriate fit rather than just tolerable and finally not to vacillate to let out even people who have done a great job so as to make vacancy for people with new skills who could give high performance in the new and additional functions of the company. In the seventh chapter of the book, '*Pay People What They're Worth to You'* the author of the book, Patty, has utters on compensation as a judgment call. According to her, while deciding the compensation to a new hire, the company should not only consider its current

business to check on its affordability but rather should also consider the future affordability with the additional revenue which might be generated by the new employee. Moreover, the author also presses on paying top of market for at least those roles which are most important for growth of the organization. Also, she suggests being transparent with employees about compensation as it trims down prejudices and promotes better judgment. Moving to the eighth chapter of the book, '*The Art of Good-byes',* the author candidly states and recommends making required changes swiftly and also making the employees know about their performance very frequently, so that people in the organization are able to judge themselves and decide whether their talents and passion will be a good match for the company in future towards which it is heading. Nonetheless, she also believes that the goods-byes can be very good, if all the managers keenly facilitate their exiting team members to hit upon new and great prospects as this kind of fluid approach is better for all concerned.

Concluding the book, the author, Patty McCord fortifies the idea of reminding oneself that people have power and also pushes on building the culture of freedom and responsibility because this helps employees share their new, innovative and amazing ideas which can help the organization grow and furthermore, this makes people feel more powerful and gives them more confidence.

THE MASTER ALGORITHM: HOW THE QUEST FOR THE ULTIMATE LEARNING MACHINE WILL REMAKE OUR WORLD

By Pedro Domingos
Penguin, Pages 329

"Now we don't have to program computers; they program themselves" this is how, Pedro begins to describe Machine Learning. The prologue is full of anecdotes form a typical daily routine to emphasize the percolation of Machine Learning in our lives. The authors state the goals of the book as they elucidate how 'society is changing, one learning algorithm at a time'. The book aims to acquaint the reader about the secrets of machine learning. It also, as the book title indicates, is about enabling the reader to devise "the master algorithm" or "the ultimate master algorithm". The idea of this master algorithm is to combine the key features of the five sets of machine learning algorithms viz. inverse deduction, back propagation, genetic programming, Bayesian inference and support vector machine in to a single algorithm. In the prologue, the author says that the book is a guide to the machine learning revolution. It is for business users, policy makers, scientists, engineers, students and even a good reference for machine learning experts.

Pedro Domingos is a professor of computer science and engineering at the University of Washington and a leading researcher in machine learning. His key research areas are machine learning and data mining. He wants computers to be more autonomous, learn from experience, adapt with ease, extract important patterns from masses of data, and discover new knowledge.

In machine learning revolution, the first chapter, Pedro starts from the scratch, introduces algorithms, talks about the two simplest algorithms, 'flip a switch' and 'combine two bits', discusses characteristics of algorithms and takes the reader to a point where he describes computers as writing their own programs. He discusses learning algorithms as the algorithms that make other algorithms. A learning algorithm largely does two things, learns knowledge i.e. statistical models, or learns some skills i.e. procedures that underlie a skill. The amazing codes behind the e-commerce applications, as per the author are basically involved in match making; producers and consumers are found for each other. In the field of science too ML is bring up a revolution, as sciences that were once data-poor get data-rich, the combination of big data and machine learning makes the understanding of the complex phenomena easier. The chapter concludes with a dialogue on how political campaigning is being transformed by Machine Learning. Pedro foresees that ML will cause more elections to have close finishes as the learning algorithms would be the eventual retail politicians.

Chapter two, The Master Algorithm can be seen to be about the versatility of the Machine Learning Algorithms. Algorithms are all domain agnostic. However, on the basis of the type of problem and on the type of assumption, certain algorithms may suit some problems better. This chapter explores the existence of a master algorithm that can take in any data and assumptions and output the knowledge that is implicit in them. The central hypothesis of the book thus is, "All knowledge-past, present, and future-can be derived from data by a single, universal learning algorithm" in the author's words. Arguments from Neuroscience, Evolution, Physics, Statistics and Computer Science have been provided to support the hypothesis. The author is of the view that data cannot be replaced by "human

intuition". In a unit of the chapter while likening the Master algorithms with a fox or a hedgehog, the author hopes that the "Master Algorithm" turns out to a hedgehog or an expert at one big thing rather than knowing many small things. The chapter ends with a description of the research communities in Machine Learning which the author calls tribes. He describes five tribes symbolists, connectivists, Bayesians, evolutionaries and analogizers. Each of the tribes uses its own master algorithm but the real master algorithm that the author is implying is an algorithm that combines all the features of the tribes.

In the following chapters the author deals with each tribe in appropriate detail citing interesting anecdotes and associates Machine Learning with standards in different fields. This reflects the tremendous amount of research and

The next chapter, Hume's problem of Induction starts with a discussion of rationalism versus empiricism. The fundamental question, "How can we ever be justified in generalizing from what we've seen to what we haven't?" is illustrated with the common example of "to date or not to date" and the famous "no free lunch theorem". Pedro also mentions that every learning algorithm is in a way an attempt to answer this question. Referring to Pascal, Aristotle, Tom Mitchell, and to Clint Eastwood's character in a movie, the author goes on to interestingly make his point about the 'no free lunch' theorem. The author very smoothly connects Machine Learning with Newton's third Principle. He describes underfitting and overfitting models in terms of the words "blindness" and "hallucination". Domingos concludes that Symbolism is the shortest path to the Master Algorithm.

The chapter "How does your brain learn?" covers the second tribe of the five tribes mentioned in the book. This tribe is that of "Connectionists". The difference between Symbolists and Connectionists is that the symbolists believe in sequential processing whereas the connectionists believe in parallel processing. The author describes "Sigmoid" curve as the most important curve in the world and discusses the sigmoid function's ubiquitous nature. It has been inferred that there are limitations to solely following a connectionist approach as, the learning algorithm is difficult to grasp, and the connectionist approach is not compositional.

Chapter five, Evolution: Nature's Learning Algorithm, begins as the title of the chapter indicates with Darwin's theorem and hence with the story of John Holland, the first person to have earned a PhD in Computer Science in 1959. Holland is known for his very significant contribution to Genetic algorithms in the form of fitness functions. Holland's scholar John Koza also contributed to the Genetic Algorithm and Programming field whose findings have also been discussed to further the discussion on the evolutionaries tribe. The similarities and differences between the connectionists and the evolutionaries are then discoursed. The Master Algorithm is neither just genetic algorithm nor just back-propagation, but it has to embrace the key features of both namely, structured learning and weight learning.

In the chapter, In the Church of the Reverend, Domingos talks about various types of Bayesian techniques. The fundamental idea behind Bayes is that it is an organized and quantified method of updating degrees of belief, in the light of new data. Pedro refers to Markov Models as the subsequent phase in the evolution of Bayes models. He describes the Bayes' theorem as the theorem that runs the world. He weaves the introduction, history, applications, and evolution of the theorems very effectively. The story of Markov modeling Pushkin's Eugene Onegin using Markov Chain is very

interesting. With this discussion on the Bayes', the author concludes that combining connectionism and evolutionism was relatively simple, but unifying logic and probability has been a much harder problem, with the problem of dealing with incomplete information or multiple datasets however been cracked, the Master Algorithms looks that much closer.

In Chapter 7, you are what you resemble, the author talks about the methods of the analogizers tribe. Analogizers can learn from as little as one example as they never form a model unlike the other tribes that learn an explicit model of the phenomenon under consideration. Pedro describes analogizers as the least cohesive of the five tribes and as a loose collection of researchers united only by their reliance of similarity judgments as the basis for learning. This chapter is about the nearest neighbor algorithm – described by Pedro as the simplest and fastest learning algorithm ever invented, the support vector machines – the heart of ML till recently, and analogical reasoning. By the end of the chapter, Domingos discusses case-based reasoning and opines that in the future, analogical reasoning will be the tool for all the domains where case-based reasoning is used.

Learning without a teacher, contrary to the prior chapters that focused on labeled data, is about learning via unsupervised learning. Here the author explains k-means algorithm, a popular clustering technique followed by another popular technique for unsupervised learning, Principal-component analysis that is used for dimensional reduction, one of the key tools in the scientist's toolkit. The author then talks about Reinforcement learning, a technique that depends on an instant response of the environment for different actions of the learner. Chunks are one more concept touched in this chapter. Relational learning is the last ingredient that this chapter offers for the recipe called Master Algorithm.

With the ninth chapter, as its name indicates, literally, The Pieces of the Puzzle Fall into Place. Machine Learning appears to be analogous with a unifying theory in science. The author sees it as unifying all the master algorithms of each of the tribes described by him. An impressive depiction of the rationale of a possible Master Algorithm is presented in the form of a diagrammatic synoptic map. Pedro then takes the reader on a trip through philosophy of each tribe and the master algorithm of each, and then comes up with the alchemy, that he calls the Master Algorithm. This chapter thus is a summary and a unifier of all the concepts learnt in the previous chapters and provides the researchers with some interesting foods for thought.

The last chapter of the book, This is the World on Machine Learning, foresees the world in which "Master Algorithm" is a universal phenomenon.

The book aids to acquaint the readers with how current day technology functions and how much computers contribute to making their lives easier. It provides ample examples of algorithms from each tribe that solve several machine learning problems as also of algorithms that power Google, Amazon and smartphones. For the reader knowledge of computer science, statistics and mathematics is a prerequisite to have a clear understanding of the machine learning concepts being discussed by the author. All in all, the book is a good repository of knowledge not only on Machine Learning and the five tribes but also on various other subjects that the author touches when he discusses solutions to problems through the machine learning algorithms.

Vision:

To be globally responsive and socially conscious, committed to innovation and creativity by developing and disseminating knowledge and practice for learning and resource use optimization. And to emerge as an organization with an optimal blend of value based growth and future preparedness, leading to prosperity of the society and nation at large.

Mission:

"We stand committed with a spirit of enterprise, will to succeed, zeal to grow and objective-achievement orientation through value based education for community at large by creating an environment of intellectual stimulus, scientific orientation and social responsibility".

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- To develop a comprehensive worldview in the students with respect for all forms of life and foster an environment where people work together and are motivated to succeed.

- To inculcate the zeal for individual excellence and yet reinforce the importance of team work.

- To support a proper harnessing of latent talents and to encourage the students to take initiatives.

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