CHALLENGES IN DIGITALIZATION OF HR: A CASE OF MANUFACTURING SECTOR

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Abstract: Workplaces were traditionally made for humans. Typewriters and computers joined them later. But with the advent of Artificially Intelligent Machines, humans must outsmart their replacements. Today's fear that machines could replace humans in the workplace is far from fiction. This study aims to understand the challenges in digitalization of HR and perception of employees towards digitalization of HR as well to find how challenging they find it to adapt to the new digitalization culture. Hence the main objective of this study is to find out what employees of HR department think and react about these challenges and includes other variables. For the purpose of research a pilot study was undertaken using classified random sampling with a sample size of 26 at solar industries. A descriptive survey research design was adopted and responses were collected with the help of the questionnaire. The responses collected were analyzed and it was found that many employees are ready to face the challenges of digitalization as they find that digitalization will enhance the efficiency and effectiveness, make manual error 0 will help in employee engagement but simultaneously can also pose a threat by replacing humans. Hence, recommendations were made regarding ways to help employees cope up with the challenges and changes in their department due to digitalization of HR.

Keywords: digitalization, artificial intelligence, organizational change

I. INTRODUCTION

Artificial intelligence is that range of computer science where the emphasis is on the intelligent machine which thinks and responds like human beings. Workplaces were conventionally made for personals. Processors joined them later. But now with the entry of artificial intelligence, humans must beat their replacements. Today's fear that machines could replace humans in the workplace is far from just narrative and fiction.

The goals of artificial intelligence include learning, reasoning and perception, and machines are wired using a cross-disciplinary approach based in mathematics, computer science, linguistics, psychology and more.

As technology improves, prior standards that defined artificial intelligence become outdated. For example, machines that calculate basic functions or recognize text through methods such as optimal character recognition are no longer said to have artificial intelligence, since this function is now taken for granted as an essential computer function.

1.1 Digitalization of HR:

When everything in the organization is being as high tech as possible in order to save time and make work effective and efficient , the most important department ,the HR department which is responsible in handling and managing human resource of the organization should be as digitalized as all other departments of the organization.While digitalization is not a new concept digitalization of HR is new trend coming up in the organization and in many companies its still in its developing stage, it has taken the organization with the blow of new successful mantra

In the era of smart technologies, digitization is the medium to achieve excellence for small as well as large businesses. But, digitization in the true sense is not creating a digital infrastructure; it is the adoption of digital culture by the organization. On this premise, businesses which reshape their vision to facilitate the convergence are the real champions of digital transformation and HR department of any organization works like a control centre in this transition process. Here, the foremost responsibility of HR leaders is to create a digital culture by educating, influencing and training the employees about the advanced working environment in an upgraded infrastructure and ergonomics. Their prime objective is not making employees technology savvy; it should be creating a digital mindset for the entire organization

1.2 Implications and Benefits of Digital Technology in HR

The buzz word 'Digital Transformation' is not just empowering the production facilities of the companies; this new age technology is as detrimental and pervasive in the other departments of an enterprise as in its operation, quality testing, and R&D. From marketing to customer satisfaction; digital technology is playing a pivotal role for companies in every business activity. But, the soul of digitization exists in the HR department because HR professionals Not only use the digital technology to simplify their work but others' work too.They help the people of other functional areas in maximising their capacity and reducing work pressure; they also help in

systematizing their work life with the help of integrated apps. And eventually, the organization scores high on both productivity and discipline.

1.3 Challenges in digitalization of HR

1.3.1 The Real Risks:
While countable and traceable processes are easier to replace, non-mathematical or quantitative processes may be challenging to change; businesses can devote more in the human brain for the more qualitative, scalable and not essentially on human neural activities like transformational rather than transactional processes, innovation or inventions and creative solutions.

1.3.2 Intelligence Eruption:
Scientific literature suggests the possibility of a sudden explosion of intelligence—an existential risk involving recursive self-improvement as a result of artificial super-intelligence. This would mean that while humans are both endowed and limited by a time-bound and experiential expansion of the brain's horizons, a machine's clock may be programmed to evolve at a much faster pace.

1.3.3 Cockroach Intelligence:
Scientists in 2009 agreed that some computer viruses are capable enough to resist destruction or abolition. Whether that overpowering level of self-sufficiency would actually be accepted at legitimate application levels is very doubtful; however; there is some agreement to the worry that machines may "over-learn" precisely to attain the job they have been allotted in a superior fashion.

1.3.4 It is Difficult to Repair Everything:
 According to a BBC report in 2016 revealed a startling case where a system trained to classify pneumonia as closer to death than patients with a history of asthma. "People with pneumonia and a history of asthma go straight to intensive care and therefore get the kind of treatment that significantly reduces their risk of dying. The machine learning took this to mean that asthma + pneumonia = lower risk of death." The real risk, therefore, is our inability to see how a computer-derived the solution that it did.

Thus the challenge before business leaders of tomorrow will be how to take advantage of AI while keeping intact the human workforce, not disrupting the economic balance in the very society for whom they are creating wealth. Hence the objective of this paper is to identify the challenges which an organization will face in digitalization of HR
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II. LITERATURE REVIEW

The following theories will be used to facilitate our understanding and study of the observed material:

According to Josh Bersin, Founder of Bersin by Deloitte "We define 'Digital HR' as 'bringing HR to where people work' – which often means deploying apps, AI and intelligent systems that just 'feel natural' in the flow of work. It's not just a matter of buying app-based systems, it also means using design thinking to study and understand the 'journeys' of your people. This gives them goal-setting, feedback, wellness and other tools which feel natural and useful in the flow of work." Hence, useful and effective digitization is not possible without the intended involvement of HR managers because they are the people who facilitate desired changes in a company. Since the digital transformation is an indispensable demand of the growing and competitive businesses, going digital is the need of HR to meet this demand in a rational and effective manner.

It is often noticed that firms which pursue digitization with the collaborative efforts of IT and HR teams experience more smooth transformation than firms which solely rely on their IT departments. So, a right blend of technological solutions by the IT department and smart strategies to align them with the organizational culture by HR is the only proven way to harness the technology at fullest. According to David Bevilacqua, Vice President at Cisco, "Most digitization projects customers are doing will fail because they are failing to re-imagine. The digital strategy should be fully in-line with the business strategy. You can't do this without first looking at how you drive, as a vision, the digitization of your journey."

ICT frameworks have hence been a critical device in the advancement of HRM. As indicated by Roehling et al. (2005), the effect of HR innovation progressively prompts exercises – beforehand performed by HR experts – now being finished by supervisors. This is conceivable as all the data with respect to representative insights, costs, exhibitions and so forth is open on the administrator's work area. Because of the developing inclusion of directors and different divisions, for example, correspondence and IT in the conveyance of HR work, the creators express that this extension is obfuscating the meaning of the HR part and the outskirts for the HR work (Roehling et al., 2005). Subsequently, HR rehearses today are not just directed by customary HR experts

Moreover, the advancement of Information and correspondence innovation (ICT) has evidently assumed a key part in the development of HRM (Thite and Kavanagh, 2009). ICT has influenced the part of HR in numerous ways. Other than empowering monetarily more powerful HR work, it essentially arranges for time and assets required for taking part in more key work (Thite and Kavanagh, 2009). Digitalization- An Emerging Trend in Human Resource Practices, Pooja Dixit(Asst. Professor, Department of Management, Bora Institute of Management Sciences, Lucknow)This paper attempts to explore the use of IT tools in HR practices by the Indian organizations. This also highlights the changing role of E-HRM in Indian organizations. E-HRM refers to an integrated, organization wide electronic network of HR data, information, services, tools, applications and transactions.

This article explains the Landscape of E-HRM by which organizations involved in technological working. The technological innovation helps in bringing new jobs and methods of working in an organization. The HR professionals use these innovations in a positive way by transforming strategies in a digital way for the upbringing of the organizations. This paper reveals the impact of technology on various HR practices like recruitment, training & development and performance management. With the help of examples like Reliance, SBI and Bank of Baroda article highlights the working of Indian organizations by using digital tools in their HR Practices. This paper also highlights the future scope of digital tools in industries for making the organizational culture more valuable. It also states the benefits and necessity of using IT Tools in HR Practices.

Data innovation tremendously affects crafted by HR experts which is regularly denoted to as Electronic Human Resource Management (e-HRM). E-HRM can be found in each field of work of HRM - for instance, digitalization of preparing and improvement, the likelihood for representatives to get to individual records furthermore, finance data on the web or hunting down conceivable occupation applicants through the web. Another essential part of e-HRM are Human Resource Information Systems (HRIS) which these days about each medium to huge measured organization uses to carefully represent information data of their workers . This impact of innovation on HRM does not stay without outcomes for the ability prerequisites for HR experts and their day by day work, so it has been proposed to assess these ongoing improvements in the substance of instructing in HR educational module.

King (2013) stated that businesses go through digital revolution when they have failed to evolve. When a business evolves with its market, continually refreshing products and proposition, reaching new sets of customers and growing the value of existing ones, it needs no transformation.

The development of new competencies revolves around the capacities to be more agile, people-oriented, innovative, connected, aligned and efficient with present and future shifts in mind. According to Bloomberg (2014), companies revealed the surprising level of ignorance in the definition of Digital engage digital customers at every touch point

Yet, from Elon Musk to Bill Gates, top technologists have warned about the potentially dangerous outcomes of super-smart AI applications. Musk has even invested in an organization that will work on AI for the benefit of humanity. So are there real risks of AI in a "human Digital revolution is described as the profound and accelerating transformation of business activities, processes, competencies and models to fully leverage the changes and opportunities of digital technologies and their impact across society in a strategic and prioritized way (Digital Transformation Guide, 2015). A similar contribution comes from Verdino (2015) who sums up digital transformation as the practice which closes the gap between what digital customers already expect and what analogue businesses actually deliver. Key enablers of digital transformation are creating a new digital transform witnessing the growing power of digital

III. RESEARCH METHODOLOGY:

3.1 Research Approach:
To explore and answer our research questions, we needed to reflect on our research epistemology and establish how we would gain knowledge about this topic.

As the aim of this study was to get a deeper understanding of a phenomenon, namely the challenges in digitalization of HR, we embraced a descriptive approach. This eventually means that we as researchers take part in the analysis of research data.

3.2 Research sample:
For the purpose of study the sample composed of employees of HR department and above official, so that one could analyze what the employees of particularly HR department's think about the new digitalized department which will obviously affect their department and them directly.

Therefore a sample of 27 respondents in total was taken

3.3 Research design:
The descriptive quantitative research was done. The most suitable and effective measurement tools to determine the challenges employees will face with the digitalization of HR through a research survey.

Accordingly a questionnaire was specifically design for the employees of 'Solar Industries lmtd." We began our research doing a literature review of the topic and then collected the responses that came after the survey was conducted.

3.4 Data Collection & Analysis Tool:
Survey method is used for data collection and for the purpose of data analysis percentage analysis was used and visual aid like pie chart were used to display data using excel

3.5 Area of study:
The HR employees of "Solar industries ltd"

IV. DATA ANALYSIS AND INTERPRETATION:

The analysis of various research questions are as under:

4.1 I think digitalization will help the work be more effective and efficient.
 In order to shed light to our first research question a analysis was run on our sample as shown below in fig 4.1:
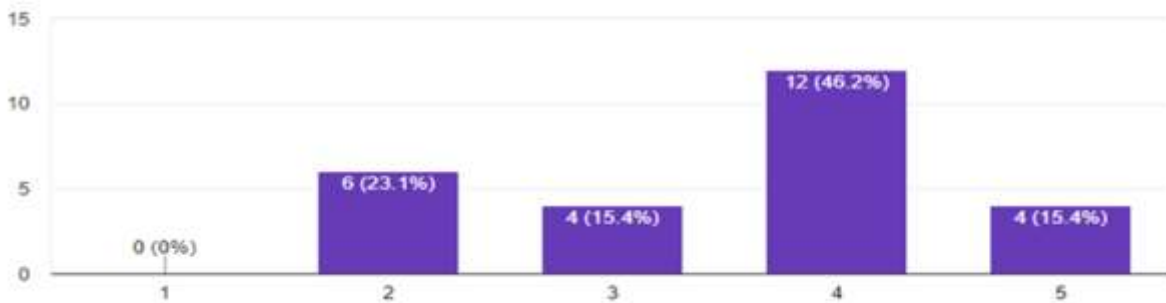

Figure 4.1: Efficiency and effectiveness of the work

Interpretation:
From the above question 15.4% strongly agree that digitalization will help the work be more effective and efficient, while 46.2% agreed, 15.4% were neutral and 23.1% disagreed
Effective and efficiency of digitalization is responded between neutral and agree (3.46) with majority of respondents.

4.2 I think digitalization will restrict/ limit my lateral and creative thinking and execution.
In order to accomplish our second research objective a detailed analysis of employee's mindset of digitalization effect on their lateral and creative thinking and execution was done as shown in fig.4.2
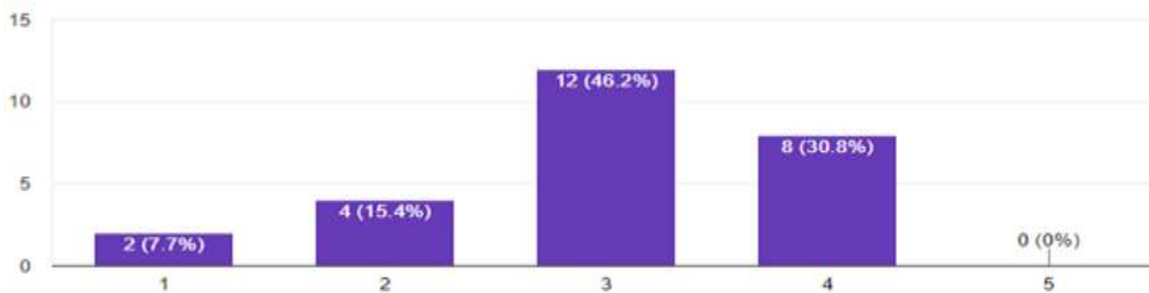

Figure 4.2: Impact on employee lateral and creative thinking

Interpretation:
7.7% strongly disagree with the fact that digitalization will restrict their lateral and creative thinking, accordingly, 15.4% disagree, 46.2% are neutral and almost 30.8% agree

4.3 I think learning and adopting the digitalization steps will be a difficult task for me
For the above research question the analysis of people adaptation and learning skills from their point of view was done
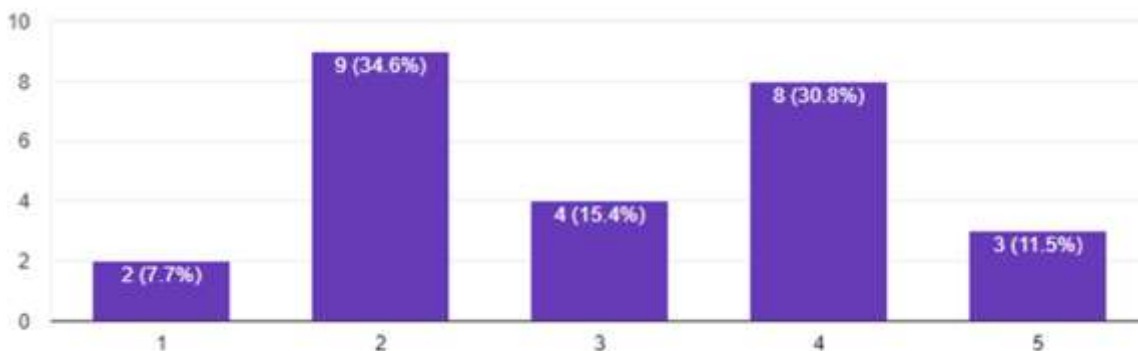
Figure 4.3: Impact on learning and adaptation
Interpretation:
7.7% respondents strongly disagree,34.6% disagree,15.4% neutral,30.8% agree and 11.5% strongly agree with the fact that adopting digitalization will be a difficult task for them.

4.4 I think digitalization will affect the employee's one to one interaction with each other
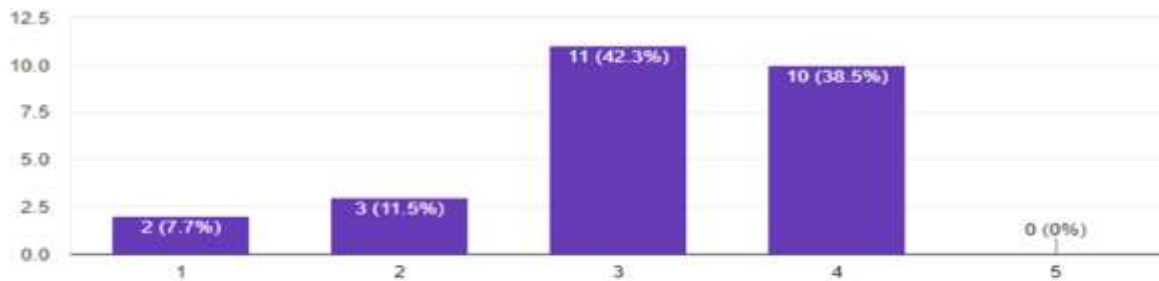As to answer the above question the analysis was done as given in fig.4.4

Figure 4.4 : Impact on one to one interaction

Interpretation:
38.5% agree to the fact that digitalization will affect the employees one to one interaction with each other, while 42.3% neutral, 11.5% disagree and 7.7% strongly disagree

4.5 I think implementing digitalization is a costly affair and can affect company's budget
An analysis for the answer of the above research question is given below as per fig 4.5
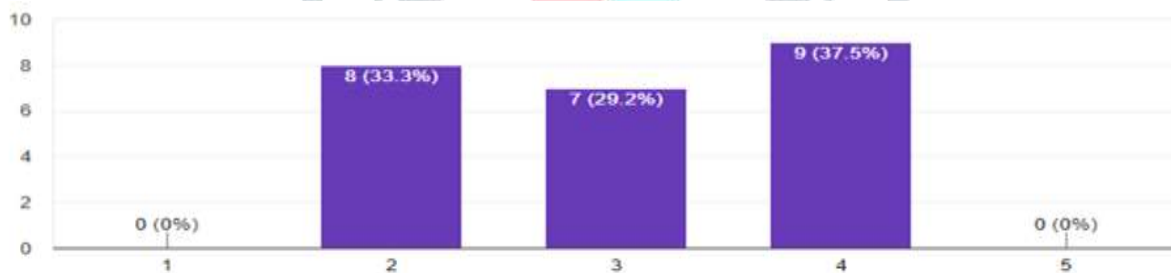

Figure 4.5: Perception that digitalization is costly

Interpretation:
37.5% agree that implementing digitalization is a costly affair and can affect company's budget, while 29.2% is neutral 33.33% disagree.

4.6 I think digitalization will help achieve 0 manual errors
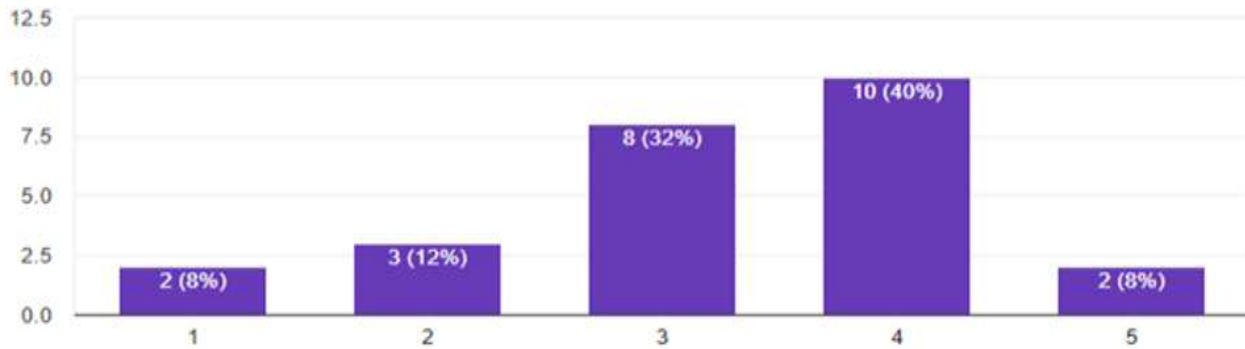The answer of the above question is given with the analysis in fig.4.6

Figure 4.6: Perception that digitalization will achieve 0 manual errors

Interpretation:
8% respondents strongly disagree and strongly agree with the fact that digitalization will help achieve 0 manual error, meanwhile 40% agree 32% neutral and 12% disagree

4.7. I think digitalization of hr will disturb daily routine activities which can adversely effect efficiency of the work in organization
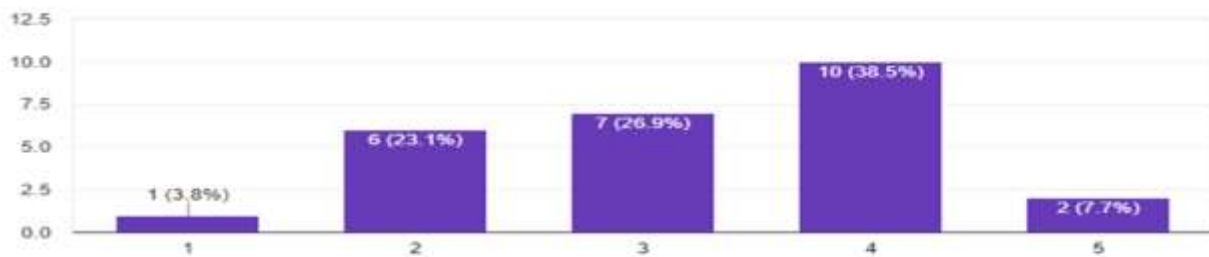As to answer the above question the analysis was done as given in fig.4.7

Figure 4.7: Impact on daily activities of HR

Interpretation:
3.8% strongly disagree with the fact that digitalization of HR will disturb their daily routine activities while 23.1% disagree, 26.9% are neutral, 23.1% agree and 3.8% strongly agree

4.8 I think digitalization will seize the job opportunities
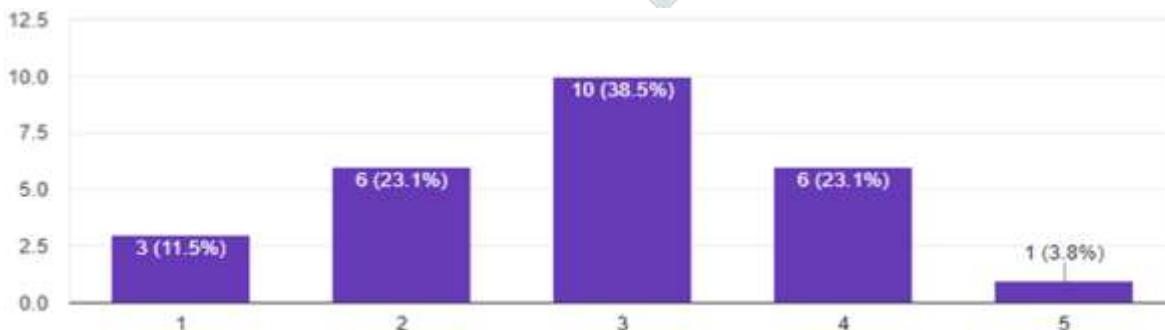As to answer the above question the analysis was done as given in fig.4.8

Figure 4.8: Impact on job opportunities

Interpretation:
38.5% respondents are neutral to the question that if they think digitalization will seize their job opportunities while 23.1%employees agree and disagree equally, on the other hand 11.5% strongly disagree with the above given question, while 3.8% strongly disagree.

4.9 I think digitalization will help achieve high employment engagement
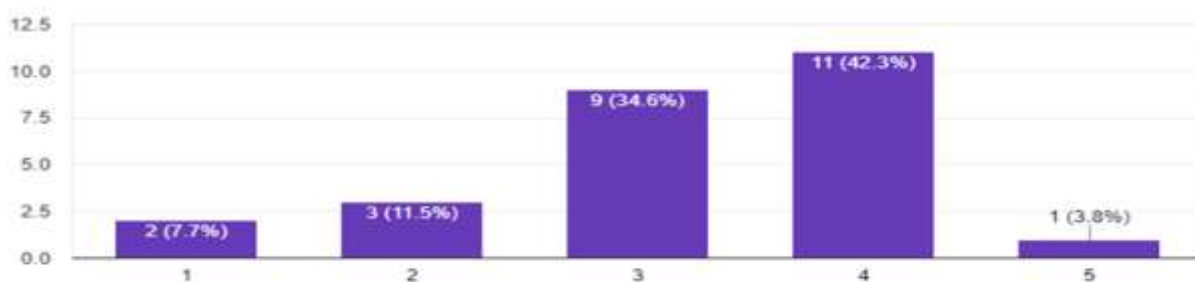As to answer the above question the analysis was done as given in fig.4.9

Figure 4.9: Impact on employee engagement

Interpretation:
In the above given question 7.7% strongly disagreed, 11.5% disagreed, 34.6% were neutral 42.3% agreed and remaining 3.8 strongly agreed

4.10. I'M afraid that artificial intelligence will take humans place in the organizations
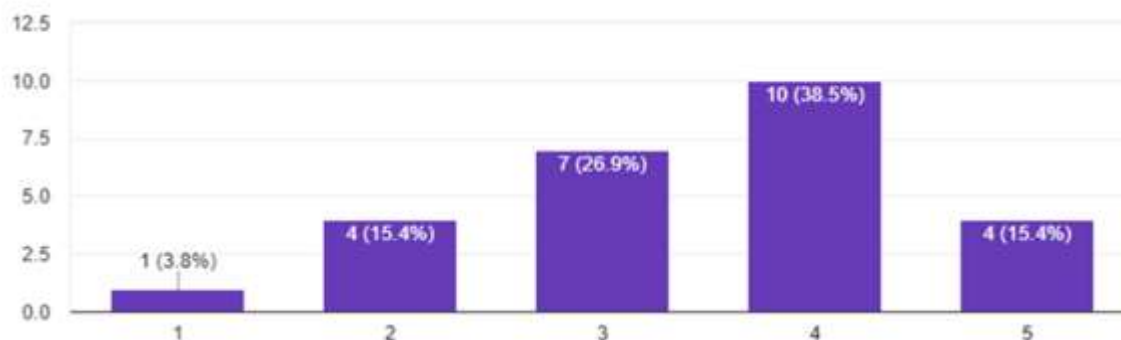As to answer the above question the analysis was done as given in fig.4.10

Figure 4.10: Perception that digitalization will replace human

INTEPRETATION:
38.5% respondents strongly agree to the above given statement, however 26.9% neutral, 15.4% disagree and strongly agree respectively, while 3.8% strongly disagree
.
On the basis of the above data descriptive statistics analysis was done. The descriptive statistics obtained on basis of analysis are as shown in table 4.1

Table 4.1: Descriptive statistics analysis

Parameters	Mean	Std. Deviation
Efficient and Effective	3.461538462	1
Limit creative thinking	2.846153846	0.840634681
Difficulty in learning	3.423076923	1.529705854
Affect one to one interaction	2.192307692	1.307669683
Costly affair	2.115384615	0.656376447
0 manual errors.	3.230769231	1.103354569
Disturb daily routine work	2.576923077	1.069267662

Seize job opportunities.	2.653846154	0.969535971
High employment engagement	3.307692308	1.003327796
Replace humans	3.923076923	1.222020185

V. FINDINGS:-

The following findings were found through Data analysis:

- 46.2% employees think that digitalization will help the work be more efficient and effective, while no. of individual strongly disagreeing to this is 0 with mean score of 3.4 response is in favor of digitalization.

- 46.2 % are neutral to the thought digitalization will restrict/limit their lateral and creative thinking and executions, which mean they don't completely deny nor they completely agree with the statement, with mean score of 2.8 supporting the findings

- 34.6% of the total employees disagree with the fact that learning and adopting the digitalization steps will be a difficult task for them hence response is in favor of digitalization with a mean score of 3.4

- While 42.53% people are neutral about the impact of digitalization on one to one interaction but mean score of 2.19 supports the disagreement of its impact on interaction

- A low percentage 35.7% with a mean of 2.1 denies that implementing digitalization is a costly affair and can affect company's budget.

- 40% of the employees agree that digitalization will help the company achieve 0 manual error, with mean of 3.2 shows employees think in favor of the statement

- Only 38.5% believes and agrees that digitalization of HR will disturb daily routine activities and a mean of 2.5 ensure digitalization won't affect efficiency of the work in organization

- Almost 38.5% of employees are neutral to the fact that digitalization will seize the job opportunities, while the average is 2.06 ensure that digitalization won't create threat to their jobs

- 42.3% of the employees agree that digitalization will help achieve high employment engagement, with the mean of 3.3 supporting the statement

- Though only 38.5% of employees, agree that they are afraid that artificial intelligence will take humans place in the organization but the mean score of 3.4 turns the game against digitalization

V. RECOMMENDATIONS:

As concluded from the other data , not all employees seems to be comfortable about the sudden shift toward digitalization of the HR in the company, for making employees more comfortable and reduce the side effect of digitalization I would recommend:

- Training for all the senior and junior employees of HR in order to teach them the importance and advantages of digitalization on their lives

- The company should not only outsource the software making process to an IT company but also appoint one person to look after the new functions.

- When the digitalization is applied in the department, there should be rewards for those who point out the loopholes in the system and also for the give the solution.

- Making employees realize how transformative technology will and can create growth which will further create Jobs

- Conducting sessions, seminars

- Before applying digitalization permanently, observe it on trial

- Understand your multi-generational workforce to tailor your digital workplace

- As we saw most of the employees who are resisting change are mostly the old senior ones, therefore team should be formed within employees who would contain one employee who would be relatively more comfortable than the other one.

- Encourage inputs from the workforce

- Unify offline and online communications, because one of the main concerns of the employees is that it would restrict their interaction with each other

- Support virtual work environments that allow employees to stay connected in distributed and virtualized work locations while balancing customer privacy and operational risk.

- Design change management and communication plans to help drive adoption and long-term transformation

VI. CONCLUSION:

Clearly analyzing the descriptive statistics it can be stated that employees find that though digitalization will enhance efficiency and effectiveness, make manual error 0 will help in employee engagement but can also pose a threat by replacing humans and be tough for employee in learning. Though employees don't think/agree that digitalization will lead to limiting creative thinking or disturb daily routine work or seize job opportunity. Also, cost of implementation didn't seemed to be a concern for the employees. Apart from this employees and organizations have their own struggles while accepting digitalization. Different challenges at different level always awaits them for example employees resistance to change, budget issues and the headache of training the employees. Hence organization should focus on Transformative technology replacement as it leads to precision, scaling up and growth which in turn creates jobs

VII. LIMITATIONS OF THE STUDY:

Time was the biggest limitation as digitalization being a emerging topic a thorough study is needed which requires a considerable amount of time. The study is based on both primary as well as secondary data and has the limitations pertaining to the usage of both kinds of data. Also the respondents may be biased while filling the questionnaire. As the accessibility to employees was very difficult hence the research area was restricted only within the Solar Industries which could be a big limiting factor keeping in mind the vastness of the manufacturing sector.

VIII. SCOPE OF FUTURE RESEARCH:

Since the study was conducted only at the head office of the company it could be conducted at different branches and also the comparative study can be made to get understanding of the challenges in digitalization of HR in the same sector as well that in other sectors. Also a bigger sample size for even pilot studies can be taken in future as the small sample in this study prohibited analysis of variance in descriptive statistics

X. ACKNOWLEDGMENT

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