

Workforce Management in Information Age

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ABSTRACT

In information age of cloud based workforce management, capitalizing on automated workforce management and optimization solutions, management is free to concentrate on higher strategic business issues. Additionally, information age makes utter changes in workforce management practices encompassing all aspects of managing the complete workforce lifecycle. Haven't we travelled a long journey? How the journey has been from the very beginning, folds reflective enigmas of workforce management. It has evolved continually adapting to the needs of changing times. What were the workforce management practices of preceding ages, and what were the underneath values. How all this depicts the prevalent principles and how these reflected in the practice of one age and the other is sought after in this paper.

This paper analyses the four ages of civilization – hunter and gatherers (foragers), agrarians, industrial and information for workforce management functions with the lens of evolution. The paper intends to understand the evolutionary pattern of workforce management in order to align the practices in line with need of the day, and find a path to understand the future maneuver in approach and practice.

Keywords: Workforce Management, Principles, Practices, self-supervision

INTRODUCTION

Technology will be exponentially powerful and will be organised in completely different ways in coming stretches. Intel Corporation (1998) interviews G. Moore and writes, “So I took the first few points, up to 60 components on a chip in 1965 and blindly extrapolated for about 10 years and said okay, in 1975 we'll have about 60 thousand components on a chip.” (p. 1); according to Moore's observation the performance of computer chip doubles every 18 months. Associated with this fast pace and its pervasive effect on humanity, the workforce and workforce management too is geared up to change its wheels.

Biological evolution and technological evolution go hand-in-hand. We can look at the history of technology as a human driven, parallel experiment of evolution. (Ricard V. Sole et. al., 2012, p 1); Technological changes show convergence of biological changes as similar discoveries are made simultaneously by different inventors. The ages of humanity grew like this. There was parallel equally developed civilization at the same time which was geographically well-nigh impossible to communicate with prevailing facilities. It has an underlying truth that growth transpires from principles; some yet explored some yet to be.

This paper is set to study the different ages of humanity i.e. foragers, agrarians, industrials, and information agers for their traits in workforce management, and how they commuted the transition from one to other. It will explore principles of workforce management and will see what the values were in the preceding ages and how the practices of workforce management emerged out of them. Then it will fill the frame of information age with its values and practices to understand the scope and role of workforce management. After making out the

above information, this paper intends to distil some insight which could be helpful in guiding the future workforce management.

THE AGES OF HUMANITY

There is no universally acknowledged classification to disintegrate the history into stages. It has been a journey of physical room and board to spiritual and moral sustenance. According to P. N. Bose (1990, p. 4), Man thus presents three states: first – the animal state, second – the intermediate state and third – human state.

Here, for the purpose of simplicity, we choose the following classification:

1. Foraging age
2. Agriculture age
3. Industrial age
4. Information age

Richard B. Lee (inside front cover) found, hunting and gathering was humanity's first and most successful adaptation, occupying at least 90 percent of human history. Foragers were surviving in the lap of nature very successfully. Weisdorf (2005) puts question, what made human societies take the radical step from foraging to farming? (p. 562); According to Smith (1975), animal extinction was the reason. To North and Thomas, it was property rights. Locay (1989) had a different view that population pressure made foragers more settled that favoured farming. Olsson (2001) too found higher population growth the reason. Morand (2002) found it to be inter-family exchange. Weisdorf (2004) claimed the emergence of non-food specialists was the ground. To Olsson and Hibbs biographic endowments played the role.

Foragers turning into agrarians were the shift of paradigm. Paradigm of controlling the situation rejected the paradigm of adapting to situation, whether it is physiological or psychological. The industrial age is nothing but the upsurge extension of ambitions of agrarian age. Lewis Mumford, in his book - 'Technics and Civilization' claims the origin of industrial revolution in early middle ages. He finds clock the archetypal model of industrial era, which later grew heavy physical manifestation. Toynbee (1884), the first historian of industrial revolution, proposed that Britain's trade has stimulated industrial growth. To A. H. John (1961), agricultural revolution increased the population and productivity, and became the steering force. To W. W. Rostow (1960), the cause of industrial revolution is capital investment, a result of surplus output. Musson and Robinson (1969) traced the reason to be science and technology.

According to Manuel (2010, p. 1) In the last quarter of the twentieth century, a technological revolution, centred around information, transformed the way we think, we produce, we consume, we trade, we manage, we communicate, we live, we die, we make war, and we make love. Information age is upon us where economic resources are remodelled with a plus of information. This is the age of adapting to exponentially dynamic world spontaneously developing dexterity with the information.

WORKFORCE MANAGEMENT

Workforce is the people engaged in or available for work, either in a country or area or in a particular firm or industry. It is the labour pool in employment.

Workforce is a group of people required to create, sustain, and enhance movement towards predefined goals.

To Harold Koontz, management is the art of getting things done through others and with formally organised groups. According to BusinessDictionary.com, management is the organisation and coordination of the activities of a business in order to achieve defined objectives.

Therefore, workforce management is, basically, the aspect of running an organisation where management is controlling the results by organising and harmonising the workforce using various concurrent tools, means, and concepts. According to BusinessDictionary.com, typical areas of focus include scheduling employees work hours, planning work responsibilities and duties, working as team, and tracking results of the work efforts.

Workforce management is the management of group of people required to create, sustain, and enhance movement towards predefined goals.

Workforce management matches business demands with fitting labour by using a combination of budgeting, planning, and analytics to optimize availability, skills, and eligibility of personnel to work and upkeep them.

Principles of Workforce Management

Principles are not limited to time, place or person but are universal. They are fundamental and manifest their presence in the form of consequences. Workforce management is the part of organisations, societies and countries; being thus a function, it inherits the consequences of befalling principles. According to Covey (2004, p. 33) Principles are like lighthouses. They are natural laws that cannot be broken. Principles are proven by research, investigation and analysis.

According to Aswathappa (2013, p. 26), the principles of workforce management are:

- I. Principle of individual development
- II. Principle of scientific selection
- III. Principle of free flow of communication
- IV. Principle of participation
- V. Principle of fair remuneration
- VI. Principle of incentive
- VII. Principle of dignity of labour
- VIII. Principle of labour management cooperation
- IX. Principle of team spirit
- X. Principle of contribution to national prosperity

He further writes, principles guide managers in formulating policies, programmes, procedures and practices. The band of time since it is known till the date has its practices which kept changing with the unfolding times.

Practices of Workforce Management in Preceding Ages

Practice is actual application of use of values, ideas, believes or methods. According to Liddell and Scott, practice means fit for or concerned with action, practical. Practitioners, once aware, subjectively or objectively, try to conform their practices, by finding ways to align them, to these principles for the best results in sight.

The first principle - principle of individual development implies full and equal opportunities to every employee to facilitate the realisation of his/her full potential. The individual development in foragers was in the delineation of learning through natural circumstances, enhancing situational awareness and above all taking the call himself in response to uncertain conditions. Life expectancy was very low, individual development was limited to keep surviving.

Agrarian age brought systematic utilization of knowledge. The capability to record the knowledge and skill and transfer it from one generation/individual to other brought gargantuan opportunities of self-development. The capability to experiment with the production and knowledge brought a new level of creativity and self-development.

Industrial age over-pumped with the scientific management, could not address the infinite capabilities of humans to grow to the call. Knowledge was limited to the guidelines and checklists for machine feeding. The old ways were dismantled, the new ways were inorganic. In such times, loss of identity, unhealthy living and hazardous working left very little space to even think about it. The wealth of wealthy was growing and the identity of contributor was waning. As green turned into grey, the joy of man's self-development got at bay.

The second principle – principle of scientific selection means selection of right person for the job and right job to the person. The foragers had a forbearing outlook. That time was shrouded by the silhouette of Darwinism. Science or art were unknown phenomena. The small bands were staunch followers of autarky following astringent familial rank and order.

Agrarians though didn't have formal scientific selection systems but informally they used to divide the work according to the capabilities of individual. Frame of cast and religious institutions had quite an effect on society. The family was the primary group and the small village the secondary, so it was too early to make scientific selection.

Industrial age derived principles of efficiency from many experiments especially from time and motion studies. The industrial age practitioners were so busy with them that they failed to scheme sustainability and hence, self-development.

The third principle - Principle of free flow of communication means keeping all the channels of communication open and encouraging upward, downward, horizontal, formal and informal communication. Foragers were individuals living in groups for safety and other physical fulfillments like herd of animals. There were no barriers in communication except channel. They evolved with some sounds, symbols, rock art, petro glyphs, pictograms, fire, smoke symbol, beacon etc.

As they proceeded making a surplus and choice, as some economic system grew, the work and systems started evolving and communication grew barriers in agrarian age. Moreover, it was limited to local place. The social systems were also got established, communication lines were comparatively clear with evolving means of transportation and communication like mails, pigeon post, acoustics etc.

Manufacturing initially was a part of the agriculture age but when the industrial age came, it relocated men from home and sent into an urban life in search of employment. There was no scope of their learned pattern. The scope defined for them was very restricted to reporting to the supervisors only.

The fourth principle – principle of participation associates employee representatives at every level of decision making. Foragers had no permanent leadership; the person taking the

initiative at any one time depends on the task being performed. This way the participation was high. In fact, thoroughgoing participation was the need for survival.

In agrarian age, more organized and systematic participation was the base of life. Though social hierarchy was astringent and the approach was top to bottom, still ample opportunities of participation were available at local level.

In industrial age, people worked under strict working conditions with long hours of labour dominated by a pace set by machines. The bore and long hours of working and no participation.

The fifth principle - principle of fair remuneration is to pay fair and equitable wages and salaries in commensuration with the jobs. Egalitarian approach was there in foragers for the available rewards - the quarry and foodstuff, appreciation of family members. Safety and joy of group was equitably taken care of.

In agrarian age, the exchange was the agent of fairness of community's production as a whole. The compensation was social frame based on community values which use to ensure everyone's pie.

Industrial age led to big increases in wealth but the average worker was not reaping the benefits of economic change. Hunger and malnutrition were routine for the majority of the population of the world. There was exploitation, injustice and Malthusian trap that made the phenomenon of fair and equitable wages terrible.

The sixth principle – principle of incentive is the spirit of recognizing and rewarding good performance. Natural and artless appreciation and honor were the incentives. Skill, wisdom and on-the-job performance were given incentives by the nature.

In agrarian age, the unusual work or more production was rewarded by extraordinary demand and monetary or exchange recompenses. People were badly paid in industrial age, they were hardly hand to mouth as they were not being treated as humans but like other resources to be exploited blindly.

The seventh principle – principle of dignity of labour is treating every job and every job holder with dignity and respect. In prehistory, environment was supporting survival of the fittest and the group was practicing honing the spirited bloodline. Principle of dignity of labour (group members) was not in conscious.

In agriculture age, though the phenomena, originated from all the religions, was there but was not practiced in all places. Society was shackled in feudalistic seizure.

In industrial era, the middle class industrialists won over the class of nobility and gentry. Ordinary people found increased opportunity of employment with fixed term compensation but they earned much less than minimum necessary for living life. Work conditions were pathetic, they were treated like draft animals.

The eighth principle – principle of labour management cooperation is promoting cordial industrial relations. Foragers had a forbearing outlook; it was too far early to think on these lines. There were small bands that use to fight for land, flora and fauna together with other bands.

In agrarian age, Silk road, extending 4000 miles connecting three continents Europe, America and Africa for traders, merchants, pilgrims, monks, soldiers, nomads and urban dwellers allowed not only scores of trade and cultural transmission but also ideas and religion.

Syncretism brought a lot of cordial cooperation while trading. Intergroup disputes were settled by jury and court.

In industrial age, the owners and managers were concerned mainly with the company's profits without any incentives, safety, regulations or good treatment to workers. Trade unions began to arise as workers realised that while one individual worker had no bargaining power but a significant number of workers together could shut down a factory. Pluralist, unitarist and Marxist/Radical perspectives were used to handle industrial relations.

The ninth principle – principle of team spirit means promoting cooperation and team spirit among employees. Hunter gatherers lived in small groups. Each group had a large territory over which it roamed. These family groups belonged to larger clans spread over a wide area and whose members regarded themselves as descendants of common ancestor. More practically, it told them who their friends and associates. There were no kings or chiefs in such societies. They all used to cooperate as teams.

In agrarian age, team was the power, though shackled in class and cast system. They were rewarded for their team deeds towards the state.

The cruel hands of industrialisation that didn't spare pepper moth and many alike also turned the human groups into individual. Strict working conditions, long hours with machines, exceeding expectation killed the concept of team and creation. For generating more and more volumes, machines were more than enough to consume their all the time.

The tenth principle – principle of contribution to national prosperity promotes providing a higher purpose of work to all employees and to contribute to national prosperity. The concept was the land and foragers did live for that in their capacities.

In agrarian age land was organized in small states that became identity of people dwelling there. The local kings used to get people contribute to the prosperity of the nation in their demarcated periphery of class and duties. In 18th century people started to identify with the country at large not rather than small province or town.

In industrial age nations had their symbols, anthems, myths, flags and narratives that augmented the patriotic nationalism. Though it was people who were contributing to national prosperity but they were miles away from higher purpose.

Changing Contours of Workforce Management Practices in Information Age

Information age is upon us. The capital of information age is the knowledge, blue collar jobs are automated and white collar jobs are turning into knowledge work. Informal learning is the new way of learning which has boundless potential for self-development. The life expectancy is increasing which will outrun the life of a business. So to keep relevance, multi-talent is the raga. Online courses and streaming PC videos are in for talent building and career enhancement.

The days of scientific selection are gone; it's the time of moral commitment. Information age is the age of web-enabled intermediaries, Application Service Provider that hosts and manages the services for the employer, internet and network monitoring software to track internet activities. Talent is judged by what it produces, not by resume, experience or other things. The practice of this age is atomization which means many workers doing pieces of a single job with hyper-specialization.

Free flow of communication in HR practices is as never before. Self-services for both, the employee and the employer are increasing in the form of web portals, mobile web and high

speed wireless net access, electronic reporting and banking facilities. The difference between personal and professional is evaporating. Organisations are making their best efforts to make communications as free flowing as possible with the help of these new methods.

Participation is very high as compared to previous eras. Abiding by the clock is no more a barrier. Day and night makes no difference. A country works in night to support another for their day activities. The globe is highly networked and is virtually present everywhere with the help of real time technologies. Integrated web based ERP provides workforce management customisable timetables, scheduling etc. which has boosted participation tremendously. People devote themselves for the purpose beyond the barriers of time, place and values of the land.

With the help of HRIS tools that are providing organisations measures of contribution in all aspects of employment to create transparent systems, remuneration of information age are heading towards the direct alignment with the contribution. Information age is moving forward to realise compensation objectives and individual equity.

Data warehouses and computerized analytical programs, internet and network monitoring software present a new platform for incentives as they are helpful in directly assessing the cost benefit very aptly. Such systems are not only measuring the performance and rewarding but also facilitating people about how they can improve using the transparent systems. Smart objectives and feedback give open environment.

Digital labour is the most dignified labour. They are the business partners. Emergence of global world economy new class of intermediaries is rising that connect enterprises with these workers. In digital era the worth of a specialist individual/team is decoupled from the structural class. Association of hyper-specialist teams forms the organisation, not the full time fixed employees.

The industrial disputes are minimising with the transparent systems and dignified work systems. Information age is empowered by the information technology infrastructure. Project management applications, ERP and many other software, and groupware are the sharp facilitator of work. Fewer companies have industrial relations functions as the labour unions are waning. The practitioners are leaving the field for other areas.

Digital age is based on team cooperation and networking. Public wireless hotspots and high speed home networks, virtual presence is reinforcing cooperation and team spirit among team members where there is no scope of personal grievances and grapevines. There is a big shift in working time, job stability, location and employer-employee contract which is turning the organisations into smart and straight organisations based on swift trust.

Phenomena of contribution to national prosperity have turned into phenomena of contribution to global economy.

The digital generation is less agreeable to subscribe to notion of citizenship as duty and obligation. They feel responsible for defining their own identities by means of different tools offered by social nets and digital communication media.

All Put Together: The Insight

Any business is run by many forces. Business force is a force that facilitates the movement of process, material or organisation as a whole from one juncture to other. These forces can be tangible and intangible, both. Tangible business forces are those which are possible to understand and realised. Some tangible forces are workforce, assets, finance, location, brand

etc. Intangible business forces are those which are incapable of being perceived by the senses or being realised or defined. Sometimes some business problems are left unanswered or half answered; probably the answer is some intangible business force.

What happened in different ages was not other than realisation of such more forces, defining them, finding ways and means to manage them and distributing the systems to next level of doers for regularizing it in practice.

When an intangible business force is acknowledged, it is made tangible by the then practitioners, and then made more tangible as a cyclic process. The more tangible means the more measurable. A business force is measurable once its importance, value and effect is measurable and it is possible for practitioners to plan a course of action taken to achieve a particular purpose.

What digital age has bestowed us with is technology progressing towards artificial intelligence which practically has endowed us to measure the tangible forces in self-supervision mode. Till the time, digital age has provided us with enough self-service as different stakeholders. Self-service when mixed with artificial intelligence emerges in the form of self-supervision or internal supervision. Self-supervision understands individual capabilities, gauging parameters of individual qualities and deliverables to organize oneself in order to aptly adapt to situation. Self-supervision is possible when data is automatically captured, analysed and reported as directed. The next level is not limiting to a place for such reporting but remains connected with some inbuilt or wearable reminders.

Workforce itself is a force, which influences and gets influenced by other forces. The field for today's practitioners is to explore the other intangible business forces, decipher them to find the correlation with workforce management in a manner to analyse the influences it's making on business forces and vice versa.

CONCLUSION

This paper made earnest work to unfold the issues involved with the information age and its nuances for the workforce management by going back and forth in the time. It identified ten principles of workforce management, namely, principle of individual development, principle of scientific selection, principle of free flow of communication, principle of participation, principle of fair remuneration, principle of incentive, principle of dignity of labour, principle of labour management cooperation, principle of team spirit and principle of contribution to national prosperity.

With these principles, it tried to present how the role of information technology has changed its face as it was in previous ages and what's daggering over the head to be addressed. How the business environment is demanding self-supervision and self-reliance by replacing self-service.

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