

Talent Management Pattern for Human Resource Professionals Using Fuzzy Relational Maps (FRM)

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Abstract

People oriented approach is the effective management doctrine in the present world of organizations. This paper is a guide for the HR professionals to understand and implement talent management practices in their department irrespective of their industry and the nature. The range and domain nodes have been decided after a detailed study in 21 companies from various industries. Data were analyzed using Fuzzy Relational Maps (FRM). HR professionals should ensure the effective identification and verification of new recruits who should be a part of the teams in organizations, to make sure that their employer satisfied with productivity, profitability and sustainability of the organization. HR professionals should be able to enhance work-life balance of employees and profitability and to improve sustainability of employer.

Keywords: Talent Management Pattern, Talent Management Objectives, Talent Management System, Talent Intelligence, Organizational Outcomes, Fuzzy Relational Maps, Hidden Pattern.

Introduction

Employees are the sensitive and critical elements in an organization. It is very difficult to retain them. Retaining high skilled talent among the talent pool is a challenging task for the HR professionals. Talent Management (TM) is a set of integrated organizational HR functions designed to recruit, train, motivate, and retain productive, engaged employees. The goal of talent management is to bring out a performance oriented, profitable and sustainable organization that meets its operational and strategic goals and organizational objectives. It is a conscious, deliberate approach with positive attitude and abilities to meet current and future organizational outcomes. Talent management implies recognizing person's inherent skills, traits, personality and offering him a matching job. 'Talent' is not a systematic phenomenon, since what is new and advanced today quickly becomes ordinary and common place and becomes obsolete. Therefore, talent has to be continuously nurtured. 'Management' refers the process of directing and leading all or a particular department or division of an organization,

often a business, through the deployment and manipulation of resources (people, money, material, intelligence, intellectual or intangible). The phrase talent management used in this study characterizes to employee in terms of the manifestations of the skills, experience, and competency for the successful performance of the job.[1] This research has been carried out to examine talent management practices using fuzzy logic approach.

Organizations, in the modern world, have been working based on people-oriented approach. People satisfaction is not only for clients, vendors or share holders but also for internal employees. Therefore, employees are the most important resources to manage and vital for companies. With this perception, the TM issue is emerged. TM enables effective and efficient management of employees. Organizations may consider that the existing skills, capabilities and qualification of its employees are sufficient for achieving their targets. The gap between desired level of skills and capabilities and the existing skills and capabilities of the work force should be narrowed. Hence the concept of talent management is introduced in order to deal with the gap and reveal the required job specification. Talent Management is a supportive tool for HRM and it raises institutional awareness. The Talent Management contributes to reduce wastes of the organizations and supports career advancement of its employees. In other words the TM is a key of success about exploring, enhancing and experimenting abilities. The objective of this study is to propose a model for managing talent of employees and utilizing this information in obtaining a yield from employees' intellectual and emotional capabilities, and experiences in an optimal level. The level of perception and job-ability match of each employee may vary. Talent Management objectives are usually evaluated in crisp logic like black and white. In this study, FRM is proposed in order to deal with uncertainty and vagueness in assessment of TM practices in different organizations.

According to Teo, Clerc, and Galang (2011), "human capital enhancing HRM system was found to have a direct and indirect impact on employees' performance outcomes. Frontline employees' performance was found to mediate the

impact on employees' performance outcomes.”[2] TM involves employees and employer's development in response to a changing and a complex operating environment. It includes the creating and establishing a supportive, employee oriented organizational culture. This study analyzes the path way of employees from recruitment to exit interview in an organization. Ultimate aim of this paper tries to bring out the issues of the talent management practices that are adopted at a call centre in Chennai. Enhancing Effectiveness of Talent Management practices by observing HR functions and find out the ways to improve the efficiency of HR practices from Human Resource planning to Exit Interview is the objective of this analysis.

The most important aspect of individual differences is the individual talents. Various talents have been deposited in individuals. The most important objective of training is, therefore, to identify individual talents and to lead them to be flourished. The variety of talents in new recruits and their individual differences are important matters which must be observed in recruitment process.[3] There is confusion in applying the terms genius, intelligence, talent and, superiority among people and within training environments.[4] We believe that high intelligence has something to do with well-read people, scientists or people with academic degrees. But intelligence is the successful response to individual's capacity for learning from past experiences. [5] In ancient China, 2200 BC, employees were examined by taking sort of oral exams every three years. The results were considered as a scale to evaluate their performances toward job promotion. [6]

Plato (427 – 347 BC), in the Republic, which Rousseau called the greatest work ever written in education world (Shoarinejhad, 2007:426), paid attention to individual differences and said that each person should be appointed to a job according to his talents and abilities. Plato also stated that people were not born identical, but different in respect to their natural talents. [7] A keyword analysis research around talent management by Google website on 2007 showed that nearly in 5750000 searches the word talent was used before or after the management related words: talent management, talent management tools, pragmatic guides for talent management, etc. [8] Also Uren and Samuel (2007) considered five main components of talent management as: attracting, recognition, development, extending and interaction. Since introducing talent management, many theorists and researchers have been trying to give a practical definition for talent management. [9] These three streams are: 1) Talent management as an indicator of scientific activities of the organization's human resources; 2) Defining talent management as a human resource planning, staff planning and recruitment planning; 3) Talent management is treated as public institution and even concentrates on matters like high performance, high potential talents and generally concentrates on talent. [10] According to Vaiman, Scullion, and Collings (2012) “decision makers are likely to select candidates closer to them who are considered good enough based on previous experience and predispositions and biases. [11]

Ramar Veluchamy's Talent Management Pattern for HR Professionals

This pattern has created after a detailed study of TM practices at 21 organizations in Tamilnadu, India. With the help of FRM, Ramar Veluchamy's Talent Management Pattern is analyzed through talent management objectives against well defined organizational outcomes.

Domain Node	Talent Management Objectives
R ₁	Human Resource Planning
R ₂	HR Personnel Availability
R ₃	Strategic Plan/Goal Alignment
R ₄	Recruitment Pattern
R ₅	Selection Criteria
R ₆	Individual Consideration
R ₇	Training Need Analysis
R ₈	Customized Training Design
R ₉	Quality of the Instructional Design
R ₁₀	Expertise of the trainers
R ₁₁	Assessment Pattern
R ₁₂	Executive Coaching
R ₁₃	Compensation Benefits
R ₁₄	Welfare Measures
R ₁₅	Engagement Strategies
R ₁₆	Appreciation and Encouragement
R ₁₇	Grievances Handling
R ₁₈	Growth Opportunities

Range Node	Organizational Outcomes
S ₁	Quality of the workforce
S ₂	Effectiveness of the Training
S ₃	Intellectual Stimulation
S ₄	Professional Development
S ₅	Succession Planning
S ₆	Work life Balance
S ₇	Productivity
S ₈	Profitability
S ₉	Attrition
S ₁₀	Retention
S ₁₁	Good Will
S ₁₂	Sustainability

Fuzzy Relational Maps (FRMs)

Fuzzy logic is based on fuzzy set which was defined first by Zadeh. In classical set theory, an element either belongs to that certain set or not. In fuzzy set theory, on the other hand, there is a level of being in a set which is called as membership levels. In fuzzy logic, 1 refers to membership level and changes between 0 and 1. 0 means no belonging whereas 1 means belonging to the set. For the element which has value between 0 and 1, this value represents the level of belonging to the set. [12]

In W.B.Vasanth et.al, [13] [14] [15] a new notion called Fuzzy Relational Maps (FRMs) was introduced. To define a FRM a domain space and a range space which are disjoint in

the sense of concepts is needed. The number of elements in the range space need not in general be equal to the number of elements in the domain space. In FRMs, the very causal associations is divided into two disjoint units for example the relationship between a teacher and a student or relation between doctor and patient and so on. Further it is assumed that no intermediate relations exist within the domain element or node and the range space. In this article, two disjoint units are talent management objectives and organizational outcomes. In FRMs, the elements of the domain space are taken from the real vector space of dimension n and that of the range space are real vectors from the vector dimension m (m in general need not be equal to n). Denote R as the set of nodes R_1, \dots, R_m of the range space, where $R = \{(X_1, \dots, X_m) / X_j = 0 \text{ or } 1\}$ for $j=1, 2, \dots, m$. If $X_i=1$ it means that the node R_i is in the OFF state. Similarly D denotes the nodes D_1, D_2, \dots, D_n of the domain space, where $D = \{(x_1, \dots, x_n) / x_j = 0 \text{ or } 1\}$ for $i=1, 2, \dots, n$ if $X_i=1$ it means that the node D_i is in the ON state and if $x_i=0$ it means that the node D_i is the OFF state W.B.Vasantha et.al.

Definition

Let $D_i R_j$ (or $R_j D_i$), $1 \leq j \leq m$, $1 \leq i \leq n$. when R_i (or D_j) is switched on and if causality flows through edges of the cycle and if it again causes R_i (or D_j) we say that the dynamical system goes round and round. This is true for any node R_j (or D_i) for $1 \leq i \leq n$, (or $1 \leq j \leq m$) the equilibrium state of this dynamical system is called the hidden pattern.

Definition

If the equilibrium state of a dynamical system is a unique state vector, then it is called a fixed point. Consider an FRM with R_1, R_2, \dots, R_m and D_1, D_2, \dots, D_n as nodes for example, let us start the dynamical system by switching 0 on R_1 (or D_1). Let us assume that the FRM settles down with R_1 and R_m (or D_1 and D_n) ON i.e.) the state vector remains as $(1, 0, \dots, 0, 1)$ in R or $((1, 0, \dots, 0, 1)$ in D). This state vector is called the fixed point.

Definition

If the FRM settles down with a state vector repeating in the form $A_1 \rightarrow A_2 \rightarrow A_3 \rightarrow \dots \rightarrow A_i \rightarrow A_1$ (or $B_1 \rightarrow B_2 \rightarrow \dots \rightarrow B_i \rightarrow B_1$), then this equilibrium is called a limit cycle.

Objectives of the study

This paper is designed to demonstrate how industry HR professionals approach the challenge of attracting, recruiting, selecting, training, motivating and retaining smart people successfully despite incredible competition with their competitors.

- To understand the need for TM practices.
- To aware about the expected organizational outcomes.
- To study different talent management practices adopted.
- To analyze the role of HR professionals while implementing TM practices.
- To understand issues and challenges faced by HR professionals in TM.
- To understand the skill set of new recruits and their training need.
- Create a talent management plan that is strategically aligned with organizational goal.
- To identify the techniques to retain the talent.
- To analyze the linkages between operational excellence and job satisfaction.
- To analyze the effectiveness of utilization of talent of the human capital.
- To check the effectiveness of recruitment and training.

Methods of determining the hidden pattern

Let $R_1, R_2 \dots R_m$ and $D_1, D_2 \dots D_n$ be the nodes of a FRM with feedback. Let E be the relational matrix. Let us find a hidden pattern when D_1 is switched on i.e. When an input is given as vector $A_1 = (1, 0 \dots 0)$ in D_1 , the data should pass through the relational matrix. This is done by multiplying A_1 with the relational matrix E . Let $A_1 E = (r_1, r_2 \dots r_m)$, after thresholding and updating the resultant vector we get $A_1 E \in R$. Now let $B = A_1 E$, we pass on B into ET and obtain BET . We update and threshold the vector BET so that $BET \in D$. This procedure is repeated till we get a limit cycle or a fixed point. Kosko Bart et.al.

Data Analysis and Interpretation

Domain nodes and Range nodes have been carefully finalized after a detailed study of talent management practices from 21 organizations in Tamilnadu, India. Attract, Develop, Motivate and Retain are the integrated functions of TM and they are further divided into range nodes and domain nodes. These nodes and their weightage may differ based on the nature of the organization. This is a generalized model of TM to assist to implement in any organization.

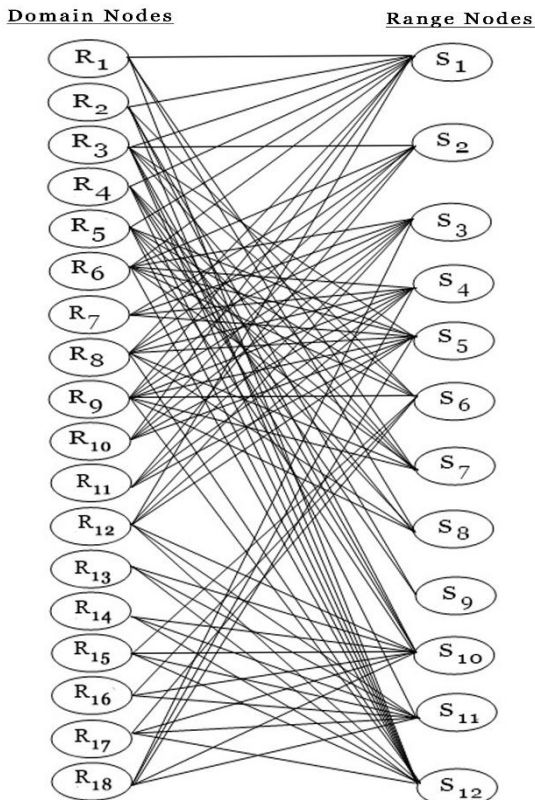


Figure 1: Talent Management objectives Vs Organizational outcomes.

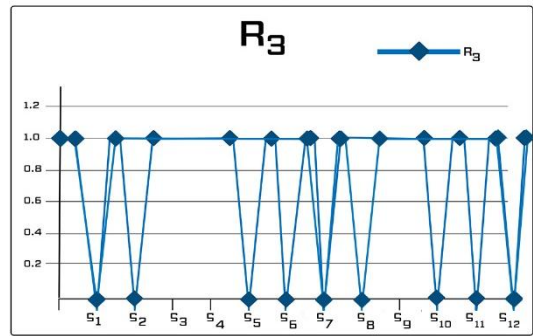


Figure 4: Strategic Plan and Goal Alignment Vs Organizational outcomes.

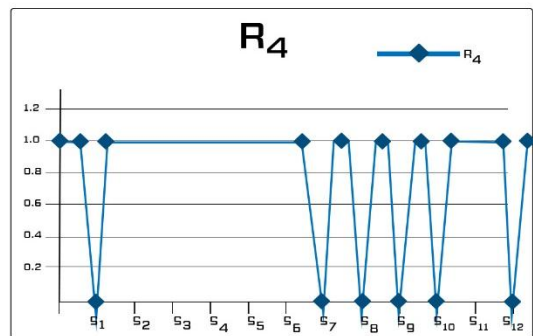


Figure 5: Recruitment Pattern Vs Organizational outcomes.

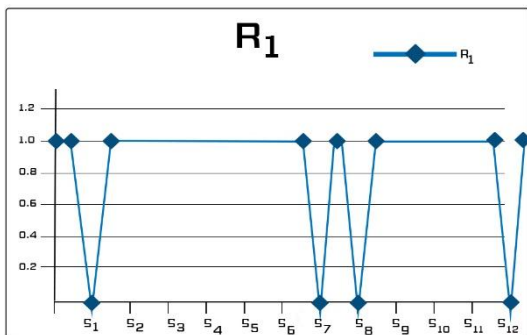


Figure 2: Human Resource Planning Vs Organizational outcomes.

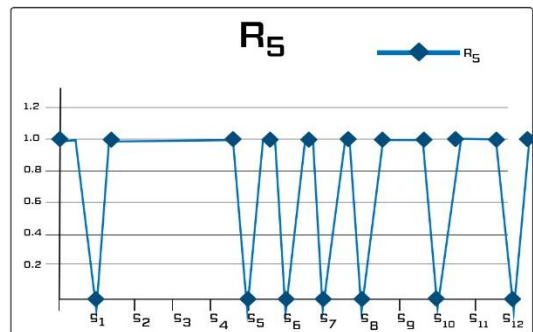


Figure 6: Selection Criteria Vs Organizational outcomes.

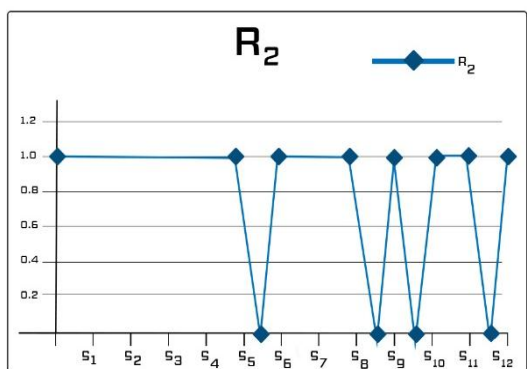


Figure 3: HR Personnel availability Vs Organizational outcomes.

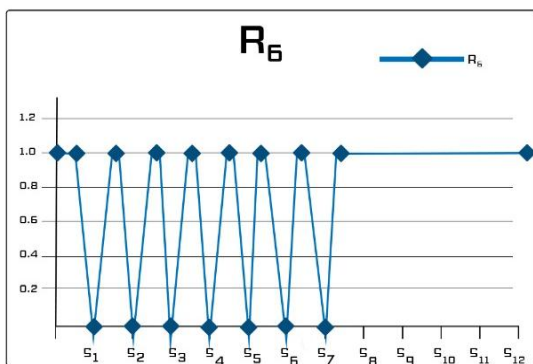


Figure 7: Individual consideration Vs Organizational outcomes.

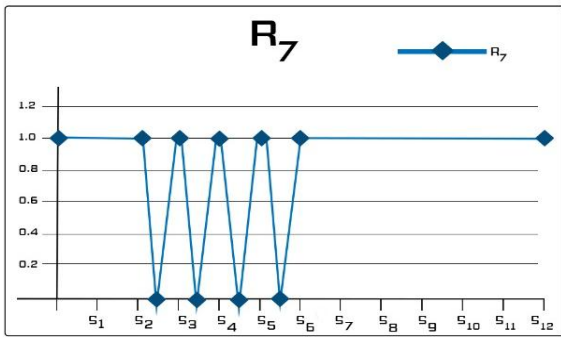


Figure 8: Training Need Analysis Vs Organizational outcomes.

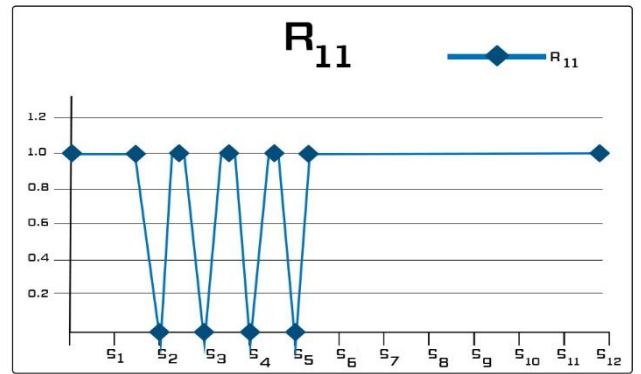


Figure 12: Assessment Pattern Vs Organizational outcomes.

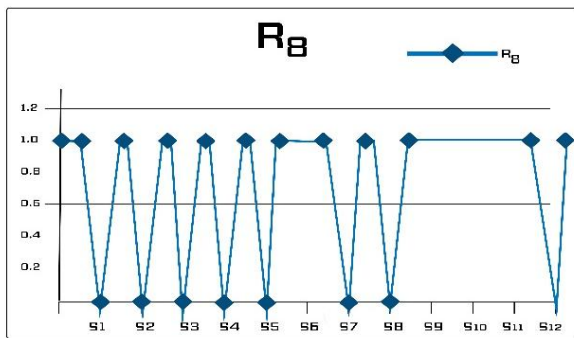


Figure 9: Customized Training Design Vs Organizational outcomes.

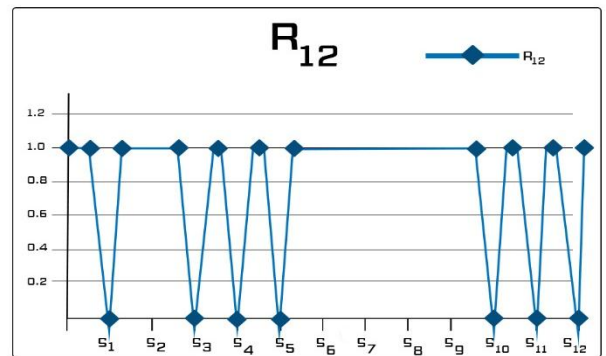


Figure 13: Executive Coaching Vs Organizational outcomes.

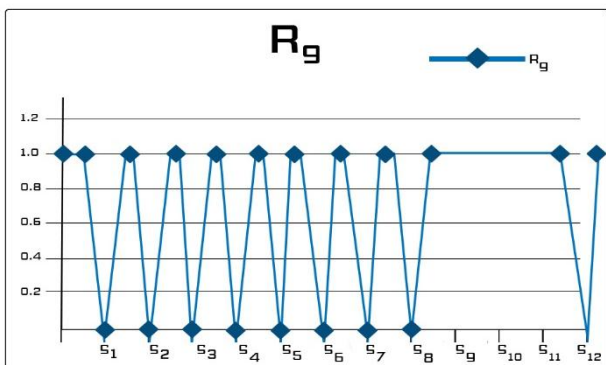


Figure 10: Quality of the Instructional Design Vs Organizational outcomes.

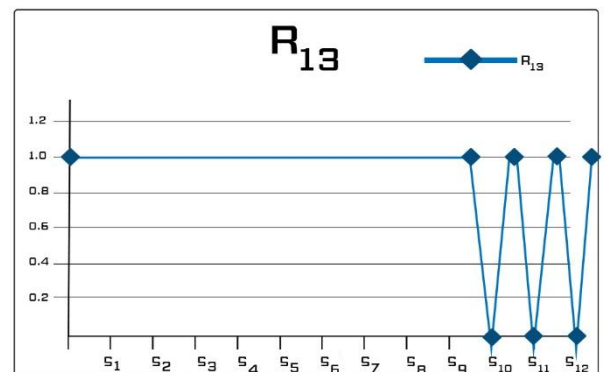


Figure 14: Compensation benefits Vs Organizational outcomes.

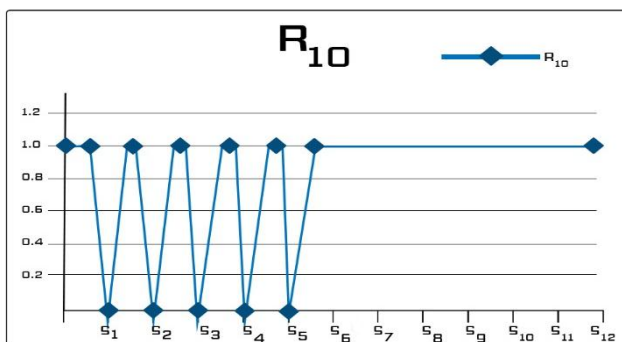


Figure 11: Expertise of the Trainers Vs Organizational outcomes.

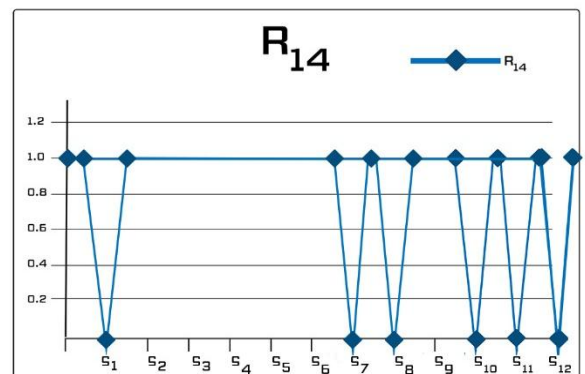


Figure 15: Welfare Measures Vs Organizational outcomes.

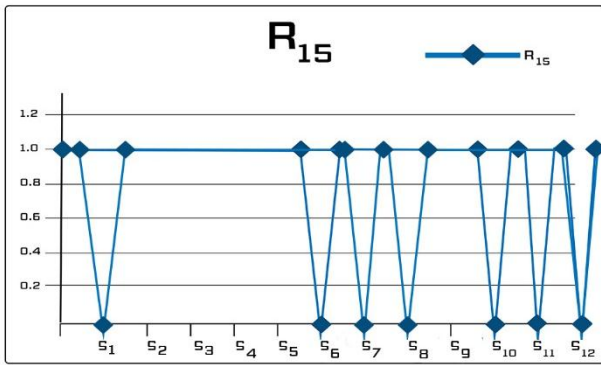


Figure 16: Engagement Strategies Vs Organizational outcomes.

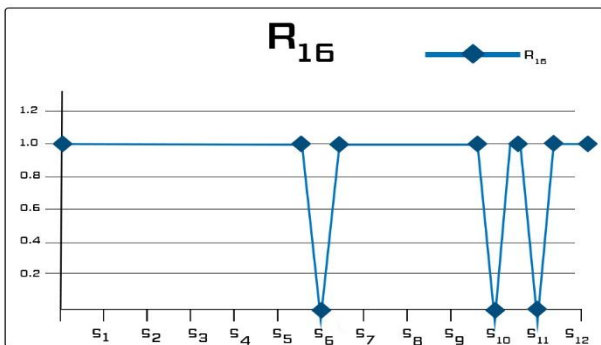


Figure 17: Appreciation and Encouragement Vs Organizational outcomes.

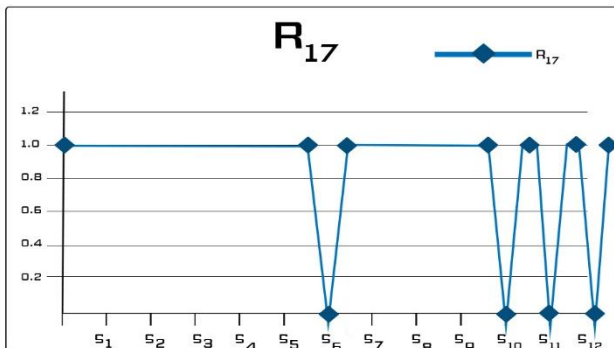


Figure 18: Grievances Handling Vs Organizational outcomes.

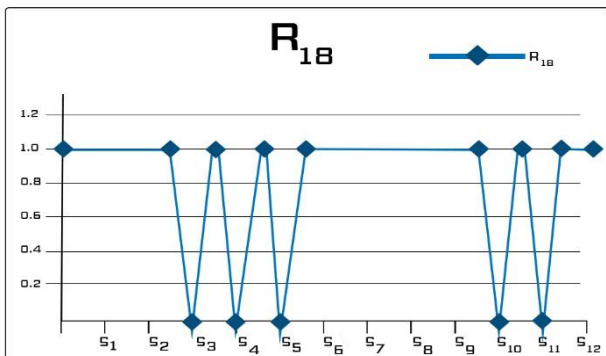


Figure 19: Growth opportunities Vs Organizational outcomes.

First Expert's Opinion

Matrix: Domain Nodes Vs Range Nodes

Talent Management Objectives Vs Organizational outcomes
 This opinion is transformed into the fuzzy relational matrix M_1 is given by,

R1	1	0	0	0	0	0	1	1	0	0	0	1
R2	1	0	0	0	0	1	0	0	1	1	0	1
R3	1	1	0	0	1	1	1	0	0	1	1	1
R4	1	0	0	0	0	0	1	1	1	1	0	1
R5	1	0	0	0	1	1	1	1	0	1	0	1
R6	1	1	1	1	1	1	1	0	0	0	0	1
R7	0	1	1	1	1	0	0	0	0	0	0	0
R8	1	1	1	1	1	0	1	1	0	0	0	1
R9	1	1	1	1	1	1	1	1	0	0	0	1
R10	1	1	1	1	1	0	0	0	0	0	0	0
R11	0	1	1	1	1	0	0	0	0	0	0	0
R12	1	0	1	1	1	0	0	0	0	1	1	1
R13	0	0	0	0	0	0	0	0	0	1	1	1
R14	0	0	0	0	0	0	0	0	0	1	1	1
R15	0	0	0	0	0	1	0	0	0	1	1	0
R16	0	0	0	0	0	1	0	0	0	1	1	0
R17	0	0	0	0	0	1	0	0	0	1	1	1
R18	0	0	1	1	1	0	0	0	0	1	1	0

S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12

$XM_1 \rightarrow (1,0,0,0,1,1,1,1,0,1,0,1) \rightarrow Y$

(Where \rightarrow denotes after thresholding and updating the resultant vector) In the above matrix, row elements denote the domain nodes and the column elements denote range nodes. When only the nodes R_5 Selection criteria in the ON state and all other range nodes to be in the OFF state then all the nodes in the domain space come to ON state. It is seen that the effect of X on the dynamical system M is a fixed point given by the binary pair $Y=\{(1,0,0,0,1,1,1,0,1,0,1)\}$. When ON state is taken as node R_5 . It is seen that the hidden pattern is the fixed point. This is the same binary pair which makes all the nodes to be in the ON state in the domain Space and also it makes all the nodes in the range space to be in ON state. The reason behind chosen selection criteria to be in the ON state, it is the critical range node which will influence all other domain nodes. If selection criteria have been decided by job specification which is skills and capabilities required to perform the specific job role, then there is less issues in any other functions of talent management practices. It affects the organizational outcomes Quality of the workforce, Succession Planning, Work-life Balance, Productivity, Profitability, Retention, and Sustainability.

Findings

1. Most of the organizations don't have talent specific initiative in place and they don't give priority based on talent.
2. Organizations do not have exclusive staff member for talent management initiatives.
3. Organizations do not want to implement the innovative methods in the industry, since they are skeptical about the result of the TM practices followed in other countries.

4. Selection criteria can affect expected organizational outcomes. If selection process is properly designed, then there will not be more issues in other expected organizational outcomes.
5. Lack of communication exists between HR Professionals and employees.
6. Individual consideration is expected to enhance Intellectual stimulation of the work force.
7. Job Evaluation and Recruitment Evaluation do not exist in most of the organizations.
8. Employees do not aware of the appraisal expectations of the management at the beginning of the year.
9. Partiality exists in organizations and it affects the talent management practices.
10. Group performance against benchmarks is not evaluated during appraisal.
11. Performance Appraisal is practiced as a tool to decide only the annual increment.
12. Employees prefer to be recognized from the management by awards and rewards.
13. HR personnel depend on the top management to finalize important decisions like strategy formulation, and policy making.
14. HR professionals' role is limited in most of the organizations as far as strategy formulations and appraisals are concerned.
15. Entry level executives are not aware of the HR policies.
16. Learning and Development initiatives do not meet the job requirements.
17. HRP is decided by the Top Management based on the future projects or production capacity or machinery availability.
18. Employees are interested in activities such as Independence, Profit sharing, Salary review, Quality Policy, Leave policy, Meetings, Small Group Activities, Competitions, Welfare policy, and Healthcare benefits.
19. Employees do not like the policies such as Cost cutting Measures, Rigid Timing, and Travel Policy.
20. Psychometric Tools are widely used by the organizations to identify the right employees.
21. Most of the organizations use questionnaire method to evaluate training.
22. MBO is the most preferred Performance Appraisal method in organizations. BSC and KRAs based appraisal is also in practice.
23. Organizations do not use the result of the appraisal for improvement of other functions.
24. Employees are highly satisfied with the work environment like place, culture, peers, superiors and sub-ordinates.
25. New recruits are not identified by competencies and the HR professionals do not focus on increasing career growth opportunity for special talents.
26. Retaining the existing talent is top priority for the organization.
27. Sales and business development are the two areas where retaining talent is most difficult.
28. Workshop, mentoring and coaching are used for professional development.
29. Organizational culture is an essential driving force for retention of the new talent and for the existing talent.
30. Base pay, Increment and Job security are important things for retention.
31. Organizations prefer to give certified training programs.
32. Budget for TM practices will increase over the next three years.
33. Employees have clarity about the company's vision, mission and organizational objectives.
34. Employees are aware of their roles and responsibilities and they know about other staff members also.
35. Apart from financial benefits, employees' focus more on career growth, work culture and on-site opportunities.
36. Employees' opinions are varied on benefits like medical insurance package, Government savings plan, Retirement plan, and Holiday entitlement.

Recommendations

The suggestions which can be made at this juncture are:

1. Like line managers, every organization should have talent managers.
2. It is time to think, think ahead of time. Future proofing HR in the perplexing business is expected.
3. Creating sustainability with tolerance would be the most appropriate strategy.
4. HR professionals should have an ability to attract talent by creating brand for line managers.
5. Work force should aware about new technology, role and career flexibility and, Product and service quality by appropriate learning and development programs.
6. HR team should be updated with new appraisal techniques, Cost control measures, Skills and Labour shortage and, Globalization and speed of change.
7. Continuous professional development is mandatory for any employee at any level irrespective of the industry.
8. Organizations and Individuals must be ready to invest more money for continuous learning.
9. Compensation is like food with proper ingredients with proper mix. It has to fulfil all financial, welfare and, social needs of employees and their family members.
10. Employee Stock Option Plan (ESOP) can be a part of Compensation and Benefits.
11. Barter system is coming back. Hence, Compensation split-up can be based on the spending nature of the families.
12. Organizations do not stretch their employees beyond optimum level. Employees can be encouraged to give their best.
13. HR departments find strategies to manage 5 Generations with cross cultural work-force in 2030. They will be virtually casual, less social, can be managed virtually and, icentric individuals.
14. Virtual classrooms for continuous learning may be needed for professional development.

15. Guru and Shishya mentoring is coming back, which was the education system existed before.
16. Talent management practices should be designed at a workman level. Blue collar workers should be treated equally.
17. Hygiene factor is a vital component of employee engagement. Therefore, creating a comfortable working environment is the basic requisite of retaining talent.
18. HR professionals can find possibilities to implement Career Entrepreneurship Model (CEM) in their organizations.
19. Employees' life has to be balanced by their work instead of balancing work and life. We need to create a work – lifestyle preference.
20. Organization must have meaningful job specifications (capabilities, skills, behaviors, abilities and knowledge) for all designations throughout the organization.
21. Job specifications should match with the Job descriptions of any role.
22. Certified trainings should be given to employees to boost their effectiveness. Executive coaching should be used as a tool of motivation.
23. HR Department has to reduce the gap between employees and management.
24. HRD can introduce open door policy for grievances handling and receiving suggestions.
25. Performance Appraisal results can be used for both administrative and developmental needs.
26. The formula, Need equals actual minus existing, which is useful to identify the training need of any individual.
27. Training Need Analysis, Training Tools selection and Training Evaluation are the essential practices in Training and Development. If any of these does not exist, it reduces the effectiveness of the training programs.
28. The results of performance appraisal should be used for various TM practices including Succession Planning, Training and Development, Recruitment strategy Formulation, Increment variation, Promotions, reallocation or relocation of the existing employees.
29. During the policy changes or the policy formulations, the management should get the response from employees as well. Employee Involvement in managerial decision making can be appreciated.
30. Organizations can implement Flexible timing based on the applicability, and the response of employees without affecting productivity and profitability.
31. Management should conduct a survey to check awareness about policies, expectations and grievances of employees.

Conclusion

With appropriate recruitment pattern, suitable candidates can be selected for the right positions, which also decreases employee turnover. This study provides a holistic point of view and clarity to the HR professionals. The pattern

suggested for TM practices helps HR practitioners to make more objective decisions and to implement TM effectively to meet the expected organizational outcomes. Furthermore, by changing the TM objectives and the Organizational outcomes of this study, new studies can be initiated in the future.

According to the survey results, there is a variation between the theoretical and the practical aspects of TM practices. At the same time, great variation in expectations occurs between the HR department and employees. This leads to the personal dissatisfaction of employees with Personnel Department. It has to be eradicated by approaching TM practices in a smart way. That approach will give better results for both employer and employees. Hence HRD will give job satisfaction by providing Quality of Work Life (QWL) to employees. Management can provide not only work-life balance, but also work-lifestyle preference. The importance of TM starts with ensuring right people for the right job in the right place at the right time. In today's changing scenario, meeting the organizational outcomes becomes an increasingly difficult task.

It is very important for every organization to have parity between organizational needs of human resource and the process of recruiting and retaining competent and talented workforce. TM needs to have a holistic approach which should consider not only recruiting human capital but also retaining them and imparting new updates to work in the changing scenario through proper TM initiatives.

The organization needs to identify the crucial talent initiative to attract, develop, motivate, and retain employees. TM objectives can have a great impact on business and therefore it is essential to create a sophisticated TM pattern, having a clear vision and roadmap of technology and process integration.

A company with a talented successful workforce can develop a public reputation for being a great place to work, which fosters loyalty among current employees. Most of the respondents said that they want to work in the same company. The management should develop and maintain the loyalty among the work force. Organizations should recognize and value the talented candidates giving them opportunities for continued success.

By undertaking this study the researcher wants to conclude that employees are very important assets for the organization. Therefore it is mandate to attract, train, and retain such quality workforce. Organizations need to clearly identify, develop, involve, and recognize key people. HR practitioners should create HR strategy and an integrated system for assessing the people for their performance, their potential for growth, and their career advancement path; and to implement and monitor, training and development, rewards, assignments based on individuals, and group assessments.

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