Virtual Organization - The HR Challenges

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Abstract

The emergence of the organizational virtualness has changed the HR dimensions and its role in the organization. New organizational forms are emerging that are different from traditional organizations. This paper attempts to provide a model of HR challenges for organizations in different stages of virtualness. First part of the paper lists the characteristics of emerging organizational forms and the changing role of HR due to the changes brought about by the application of ICT. Based on Venkatraman & Henderson (1998) three vector, three-stage model of organizational virtualness HR challenges for each vector as a continuum across stages are identified and enumerated in the second part of the paper.

1.0 INTRODUCTION

Global competition, advances in the computer technology, convergence of the various fields of technology, the emergence of new technologies, shift from the production oriented economies to service oriented economies, transformation from production based economies to information economies and to knowledge based economies, opening up of the former soviet block countries and developing countries to international business and socio-political changes leading to regional co-operation (for example European Monetary Union) are changing the way business is being conducted. The organizations are transforming into new entities which are just being identified, and there is a long journey ahead in description and conceptualization of these organizational forms. The new forms of organizations are similar only in the sense that they are better suited to compete in the new environment characterized by uncertainty and discontinuous changes. Many researchers have studied these emerging forms and there is still much to learn to prescribe and design the organizational structures and processes which will enable the transformation of the existing organizations and the design of new organizations that will be able to take advantage of these changes and are competitive in the emerging environment.

The breaking up of the former Soviet Union, opening

up of the developing economies and the emergence of the Asian Tigers have changed the competitive landscape of international business. These changes pertain not only to organizations conducting business in the international arena but also to those who operate only in the local markets. An organization can no longer take its market and customers for granted. The dynamic and turbulent environment requires flexible and fast responses to changing business needs. Many organizations have responded by adopting decentralized, team-based, and distributed structures.

The advances in the computer technology, the information technology, communication technology and the convergence of the computer technology, communication technology and media, and the emergence of new technologies like virtual reality and artificial intelligence have changed the way an organization is functioning. The virtualness of organizational members as well as organizations themselves, enabled by these technologies has shifted focus from the concept of workplace to the concept of workspace. The traditional competitive advantage based on the access to resources, barrier to markets and unimitable technology and products are no longer valid in the turbulent and uncertain environments. These competitive advantages crumble to nothing against new organizations which compete on the basis of their ability to utilize resources through the use of technology - to acquire and retain a distributed/virtual structure by supporting cooperation among people and organizations working from different locations.

The role of Human Resource Management and Organizational Development has undergone tremendous changes in line with the new organizational forms. The emergence of the organizational virtualness has changed the HR dimensions and its role in the organization. The HR function of these organizations and the skill set required of the HR manager are far different from the traditional HR and the HR manager. Further HRD and HRM gains significance in view of the emergence of the concept of workspace and knowledge economy. This paper traces the development of new organizational forms, their characteristics and the challenges for the HR manager.

2.0 NEW ORGANIZATIONAL FORM: VIRTUAL ORGANIZATION

The dominant organizational form of the new emerging forms is the Networked Organization and its variation Virtual Organization (VO). The continuum of the network organization to the VO based on the control and uncertainty is shown by Jagers et al, (1998). The networked organization was first described by Miles and Snow (1986), which they termed as the dynamic network form. In the early nineties the virtual organization became the concern of one and all as the solution to all the competitive woes of the changing environment. There is a plethora of definitions in the literature on VO and no two authors agree on the definition or the definitive characteristic of the VO form.

2.1 Defining Virtual Organization

Sieber (1997) defines virtualness as 'the ability of the organization to acquire and maintain critical competencies through its design of value-adding business processes and organizational structure.'

There are four common views on virtuality

- virtual means 'unreal, looking real'
- Virtual means 'immaterial, supported by ICT'
- Virtual means 'potentially present'
- virtual means 'existing, but changing'

These views give rise to four broad themes of definitions. VO is identifiable as one organization, but in fact consists of many different organizations. Bultje et al (1998), identified twenty seven different characteristics of VOs from literature. These characteristics were applied to six VOs and the authors identified seven primary characteristics and five secondary characteristics. The VO is defined based on these characteristics.

A Virtual Organization is primarily characterized as being a network of independent, geographically dispersed organizations with a partial mission overlap. Within the network, all partners provide their own core competencies and co-operation based on semi-stable relations. The products and services provided by a VO are dependent on innovation and are strongly customer-based.

Further, a virtual organization is secondarily characterized by a single identity with loyalty being shared among partners and the co-operation based on trust and information technology. In addition, there is also a clear distinction between strategic and operational levels. This definition will be followed in this paper throughout.

3.0 TYPES OF VIRTUAL ORGANIZATIONS

VOs may be of different forms like virtual teams, virtual functional units, virtual project teams, virtual network of organizations, virtual web, etc. The VO typology as in Campell (1997) and later adopted by Have et al (1997) is mostly used and relevant here.

- Internal VO
- Stable VO
- Dynamic VO
- Web Company

In a VO the role of a HR professional is that of a coordinator and facilitator. The HR professional in a VO is more like a consultant (may actually be a consultant on contractual basis rather than on permanent employment). The skill set required is different from that of a HR professional in traditional organizations. There may be a convergence in the required skill sets in VO and the organizations of the twenty-first century. Hunter of Anderson consulting identifies the following skills as required by their consultants (Hunter 1999):

- A deep knowledge of traditional HR related activities, experiences, and processes
- Process redesign
- Defining competencies and designing training
- Relationship management, including fostering communication
- General business knowledge
- Strategic skills, particularly cost cutting and cost maximization and
- Organizational change navigation, which covers leadership and general change management and cultural issues

3.1 HR Competent Forces

The important competent forces that influence a VO are

- Competence
- Culture

- Co-operation
- Communication
- Compensation
- Co-ordination

In a VO the culture plays the most vital role in the effectiveness of the organization. The low or nil traditional channels of communication create a complex situation where the trust among entities develop differently but still play the most important role in evolving the work culture spanning organizational, national and socio-cultural barriers. Identification of competencies and developing commonly accepted compensation system is another dimension that influences the effectiveness of the VO. Communication in the IT enabled channels have the potential to help in the development of trust and hence the work culture. The VO design is dependent on the premise of collaborative work for which co-operation and co-ordination is essential which is influenced by the work culture that evolves. The HR strategies need to take care of the virtual dimensions of trust and work culture, competence and compensation management systems, and collaborative work through holistic and harmonious use of IT enabled communication channels.

4.0 CHANGING ROLES OF HR

The roles of HR in an organization is changing dramatically· with information technology development, turbulent environment, uncertain markets, changing norms of work-society interactions and globalization.

A Delphi study conducted by the Workforce identified six broad areas in HR where the greatest change will occur in the next decade as Work Place Flexibility, Global Business, Work and Society, Work Force Development, Definition of Jobs and Strategic Role of HR.

Ten most important changes that are likely to occur in these six areas were identified and those reflect the virtualness of an organization are as follows:

- Workplace Flexibility: Collaborative Work in a Virtual Office
- Global Business: Borderless

■ Work and Society: Business Requires a Global Workforce Working to Live, Not Living to Work

■ Workforce Development: Constant Learning in a Just-in-time Format

■ Definition of Jobs: Jobs Get Bigger and Broader, and

■ Strategic Role of HR: Becoming Leaders, not just Partners.

The role of the HR professional in these emerging organizational forms is changing from the traditional select, train, evaluate and reward to a strategic value addition role through expanded skill set.

Michigan University's HR competency research in a survey of ten thousand individuals in 91 firms in 1988 found that the HR professionals had to demonstrate competencies in knowledge of business, delivery of HR practices and ability to manage change. Most importantly, the ability to manage change was considered more important than the other two combined.

In a survey of five thousand participants in global firms in 1992-93, it was found that the HR professionals needed to be more knowledgeable about line functions and be able to send clear messages about organizational goals and directions. The relative amount of time spent on strategic issues escalated while the transactional focus of the leading firms diminished.

The 1997-98 study with five thousand participants found two additional domains of HR competencies of the successful HR professional- culture management and credibility (refer work by Ulrich and associates for all the three studies mentioned above). Dyer (1999) summaries the 'core skills' of the 'new' HR manager as

■ Ability to be a business partner with others in the organization
■ Technical competence in the human resource (HR) function
■ Competence in organization development (OD) technologies
■ The ability to help an organization manage change effectively

5.0 VIRTUAL STRATEGIES

Venkatraman and Henderson (1999) rejects virtual organisation as a distinct structure (like functional, divisional or matrix) and view virtualness as a strategic characteristic applicable to every organisation. They propose a new business model, which considers the virtualness as a strategic variable.

Organizational virtualness is viewed as a strategy

Vectors and Characteristics	Stage I	Stage II	Stage III	HR Strategies
Customer Interaction (Virtual Encounter)	Remote Experience of Products and Services	Dynamic Customization	Customer Communities	Mindset Change Virtual
Asset Configuration (Virtual Sourcing)	Sourcing Modules	Process Interdependence	Resource Coalitions	Interpersonal Skills
Knowledge Leverage (Virtual Expertise)	Work-Unit Expertise	Corporate Asset	Professional Community Expertise	Knowledge Orientation
Target Locus	Task Units	Organization	Inter-Organization	

Table 1

Levels at which Vectors operate

that reflects three distinct yet interdependent vectors virtual encounters, virtual sourcing and virtual expertise. Each vector has three distinct stages as shown in Table I signifying the level at which the vector is operating individual, team or organization. Each vector has specific HR challenges. This paper charts the HR challenges in each vector as a continuum across the individual, team and organization (fig. 1).

Figure 1
HR Focus For Virtual Strategies

Across Individuals	Across Teams	Across Organizations

5.1 The Customer Interaction (Virtual Encounters)

The customer interaction vector deals with the new challenges and opportunities for an organization in customer interactions. IT allows customers to remotely experience products and services, actively participate in the dynamic customisation and create mutually reinforcing customer communities. The focus was on efficiently distributing products and services, the emerging global, digital economy allows for establishing and leveraging two-way communication links between a company and its customer. Customers are interacting with companies in innovative and creative ways now as never before.

5.1.1 Remote Experience of Products and Services

The possibility of remotely experiencing products and services creates a powerful strategic tool in the hands of a determined entrepreneur. Software companies provide telephonic and web based diagnostic services. Banks (www.Citicorp.com), Airlines (www.usair.com), Brokerage firms (www.schwab.com, www.etrade.com, www.ameritrade.com), Software firms(www.egghead.com), Hardware suppliers (www.dell.com), News channels (www.cnn.com, www.ft.com, www.wired.com), Contract Service providers(www.onstar.com), etc. offer remote experience to the customers. In India, ICICI bank (www.icici.com), State Bank of India (www.sbionline.com) Railways (www.indianrail.gov.in), Fabmart (www.fabmart.com), and Times of India publications (www.indiatimes.com) are some examples where

organizations provide remote experience to customers.

5.1.2 Dynamic Customisation of Products and Services

The second stage of customer interaction vector focuses on the opportunities and challenges in dynamically customising products and services. Competitive markets are rapidly eroding the margins due to price based competition, and companies are seeking to enhance margins through customised offerings. Dynamic customisation is based on the three concepts of modularity, intelligence and organisation. Modularity is applicable to products (PCs, Automobile Components) and services (www.cnn.com, www.schwab.com). Intelligence is the use of intelligent software like Firefly (www.firefly.com) and automated collaborative filtering as in yahoo's personalized site (www.my.yahoo.com), movie recommendation site (www.filmfinders.com) and Barnes and Noble's online book store (www.barnesandnoble.com).

5.1.3 Customer Communities

The most profound impact in the virtual model is the emergence of electronic customer communities. These communities signal a power shift from the manufacturer to customers. Communities are information gathering and information-disseminating conduits. Companies need to manage their relationships with the customer communities. Some have strong brand commitment like Harley Owners Group (HOG) hosted by the Harley Davidson site (www.harley-davidson.com). Other communities are in the public domain or exist in isolation from the companies like the chat groups in yahoo (www.chat.yahoo.com), mining co (www.theminingco.com) and in India the India times site (www.indiatimes.com)

5.1.4 HR Challenges

The HR challenges in this vector are
- Changing mindset: virtualness as an essential attribute of products and services
- Creativity and innovation management
- Training for new technology and skills
- Development of systems for knowledge leverage
- Performance evaluation based on value addition to end customer

Figure 2
The Customer Interaction (Virtual Encounters)

Changing Mindset ———————————————→ Continuous Customer Interaction

Figure 3
The Asset Configuration (Virtual Sourcing)

Relationship Management ——— Virtual Interpersonal Skills ——— Team building & Management →

In the customer interaction vector the most important HR challenge is changing the mindset of the members of the organisation to accept virtualness as an attribute of products and services (fig 2). The emphasis is on the creation of knowledge internally in the first stage to knowledge external to the organisation in the third stage but upgraded continuously and instantly available to the organisation. Development of systems which enable the application of virtual attributes to the products and services and their acceptance is the primary focus in the first stage. In the second stage the focus is on multi-skilling to enable dynamic customisation. The thrust is on the retraining, redeployment, motivation, creativity and innovation management, and compensation. In the third stage focus is on creating relationship management skills and external knowledge creation and management. Management of knowledge created externally will determine the competence level of the organisation in knowledge management in the broader sense.

5.2 The Asset Configuration (Virtual Sourcing)

Asset configuration vector focuses on the firm's requirements to be virtually integrated in a business network. Firms using Internet for business- to-business transactions can structure and manage a dynamic portfolio of relationships to assemble and co-ordinate the required assets for delivering value to the customers. Effective contracting of complimentary capabilities through a network of suppliers and subcontractors is a characteristic of virtual organising. As organizations refocus on their core competencies and move away from vertical integration, they will obtain complementary assets through interim relationships. The challenge is far from the make versus buy decision or vertical integration but involves a continuous reconfiguration of critical capabilities assembled through different relationships in the business networks (fig 3).

5.2.1 Sourcing Modules

The first stage in this vector deals with the benefits of efficiently sourcing, standard modules or components. Modularity and IT enables the efficient management of relationships in a dynamic manner. Companies like Nike, GM, P&G, Reebok, GE, Boeing, Dell, etc. have leveraged on their ability to maintain a relationship in a continuously changing environment. The selection of the asset to be out sourced is a complex process in an uncertain environment and requires a continuous monitoring of the market and the changes in the customer requirements. In India most of the big automobile manufacturers like Tata engineering, Maruti, Bajaj, and Hero Honda leverage on IT for supply chain, inventory and logistics management.

5.2.2 Process Interdependence

The second stage focuses on the interdependence of the business processes across organisational boundaries. There is a trend towards External Specialists carrying out critical processes without loss of control. Specialist firms have emerged in the last few years in the areas of accounting, inventory control, call-centres, customer service, database analysis, telemarketing and logistics. In India Mercedes Benz India has tied up with BlueDart for its logistic operations. Monsatto is sourcing its sales force from Mafoi Consultants. Most of the top software organizations in India offer IT process capabilities to international customers.

5.2.3 Resource Coalitions

Third stage in the asset configuration vector focuses on the establishment of a resource network, in which the firm is part of a vibrant, dynamic network of complimentary capabilities. A Corporation becomes, not a conventional portfolio of businesses but a portfolio of capabilities and relationships. Companies are increasingly relying on external sources not only for support activities but also for critical resources. Positioning the firm in a broader network of resources in the market place is a competitive advantage.

In a virtual integration model, one firm doesn't dominate all others in a network. Thus every firm balances its position relative to one set of resources, with secondary roles related to other complimentary resources. For example IBM is dominant in mainframe architecture but follows standards established in other areas. The importance and relative priority of resources changes over time. Creating a resource coalition and navigating under fast changing market conditions is not simple. HLL and Idea cellular are examples of resource coalitions in India.

5.2.4 HR Challenges

The HR challenges in this vector are:
- Developing relationship management skills
- Attitude change to trust suppliers as team members
- Creativity and innovation management
- Developing inter personal skills in virtual environment
- Developing team building and maintaining skills in an virtual environment
- Individual & team (both internal & external) performance evaluation systems.

The thrust in this vector is in the development of virtual relationship management skills in the first stage to performance evaluations systems and compensation management systems in the third stage. The main focus of this vector is the building of trust between the different parties concerned. In the first stage the focus is on the development of virtual relationship management skills. Virtual Interpersonal networking skill development is the most important HR challenge in the second stage. Systems for multi-tasking and co-ordination, virtual communication skills, and knowledge creation and retention skills are other important factors in the second stage. Virtual team building and virtual team management skill development is the focus in the third stage.

5.3 The Knowledge Leverage (Virtual Expertise)

This is concerned with leveraging the diverse sources of expertise within and across organisational boundaries. IT now enables knowledge and expertise to become drivers of value creation and organisational effectiveness. The current trend is towards greater employment opportunities in smaller companies, fewer permanent or guaranteed jobs, more work at remote locations, greater reliance on contract workers, and greater utilisation of teams. This vector complements the previous two vectors.

5.3.1 Work Unit Expertise

Work is more and more getting distributed across time and distance and tasks are getting redefined. The expertise to carry out the tasks of a work unit cannot be achieved by individuals. Organisations wanting to utilise the expertise of the individuals across the work unit are using IT tools. HP used IT to capture and use knowledge of the individuals across the organisation. Electronic notice boards and databases of success/failure stories are used by many Indian organizations to capture the knowledge of individuals and to preserve and distribute.

5.3.2 Corporate Assets

The second stage focuses on harnessing the collective expertise across the units rather than within units. The main focus is less on tangible and codified knowledge and more on tacit knowledge to collectively leverage. Xerox captures knowledge about new ways of servicing its products. Many different knowledge workers - customer service engineers, field service engineers and product specialists - created the Eureka process, which rests on a database called 'Tips'. Key to this process is the emphasis on the validation of expertise and knowledge. After a 'tip' is submitted, the tip authors can monitor its progress through the validation process, and the originator's contribution is recognised. Strategy consultants operating in India and elsewhere heavily depend on the documentation of earlier assignments across industries and regions creating web of information that any individual can access anywhere.

5.3.3 Professional Community Expertise

In the third stage, the focus is on the community of professional expertise-well beyond the domain of a focal organisation. Organisations are increasingly leveraging the expertise in the extended network (suppliers, customers, partners, alliances, and so on) and the broader professional communities. For example some firms retain a core of experts on their payroll while contracting for other skills needed. As

companies identify and integrate expertise from multiple sources, they face the challenge of how to best compensate and motivate employees with expertise. Emergent virtual communities serve as a primary mechanism for collecting and legitimising knowledge.

5.3.4 HR Challenges

The HR challenges in this vector are:

- Development of knowledge creation, leverage & utilisation skills
- Virtual training for knowledge diffusion skills
- Continuous training for individual competence enhancement
- Systems for knowledge creation, leverage & utilisation
- Coaching skills at all levels
- Performance evaluation based on knowledge creation
- Creative and just compensation.

Figure 4
The Knowledge Leverage (virtual Expertise)

| Knowledge Creation | Knowledge Orientation | Knowledge Utilization |

Knowledge is the focus of the third vector. Creation of knowledge in a task/functional environment as well as organisational level knowledge to knowledge utilisation is the HR challenge continuum in this vector. The creation of knowledge in a virtual environment at the task/functional team level is the focus of the first stage. In the second stage the focus shifts to the creation of knowledge out of individual and team experiences which is available to the organisation. In the third stage the emphasis is on the utilisation of knowledge which is available in the

virtual environment, rather than creating own knowledge (fig. 4). Coaching skills will play an important role in the organisational effectiveness. Compensation along with performance evaluation in a creative and just manner will be important in the knowledge economy of the emerging future.

6.0 CONCLUSION

One of the most important challenges in the transition of the organisation towards virtualness is changing the Mindset of the organisation to accept virtualness as a strategic variable. The new business models and the IT based systems call for a change in the processes, for the introduction of the systems to be effective. Technology introduction without changing the processes to align harmoniously will not lead to any perceptible change. The development of virtual alliances require the development of interpersonal and team skills in a virtual environment. The development of leaders as coaches is also important in maintaining the organisational culture in VO. Developing systems for Knowledge Sharing, Knowledge Creation and Knowledge Leverage are important for an organisation to be competitive. Creativity and innovation management with an acceptable performance evaluation procedure and just and flexible compensation plan is a must for an organisation to survive in the Virtual Environment. Continuous training, skill enhancement and providing challenges are critical in retaining the knowledge workers with the organisation.

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REFERENCES

1. Bultje, R. and Wijk, J. (1998). "Taxonomy of Virtual Organizations, Based on Definitions, Characteristics and Typology", VoNet: The Newsletter, Vol. 2, No. 3. Available: http://www.virtual-organisation.net.

2. Campell, A. (1997), Creating the Virtual Organization and Managing the Distributed Work Force, Paisley, UK: University of Paisley.

3. Davenport, H. and Thomas, K. P. (1998). "Two Cheers for The Virtual Office", Sloan Management Review, Vol. 39, Iss. 4, pp 51-65.

4. Davidow, H. W., and Malone, M. S. (1992), The Virtual Corporation, New York: Harper Collins

5. Dyer, W. G. Jr. (1999). "Training Human Resource Champions for the Twenty-first Century", Human Resource Management, Vol. 38, Iss. 2, pp 119-124.

6. Kemske, F. (1998). "HR2000", Workforce, Vol. 77, Iss. 1, pp 47-60.

7. Have , S., Lierop, F., and Kuhne, H.J., (1997). "Hoe vitueel moeten we eigenlijk zijn?", Nijenrode Management Review Vol. 4 Iss. 3 [Dutch]

8. Hedberg, B., Dalgren, G., Hasson, J., and Olve, N. (1994), Virtual Organizations and Beyond: Discover Imaginary Systems, New York: Wiley.

9. Hunter, R. H. (1999). "The 'new HR' and the new HR consultant: Developing Human Resource Consultants at Anderson Consulting", Human Resource Management, Vol. 38, Iss. 2, pp 147-155.

10. Jagers, H., Jansen, W. and Steenbakkers, W. (1998). "Characteristics of Virtual Organizations", Proceedings of the VoNet workshop, Bern, April 27-28, pp 65-76. Available: http://www.virtual-organisation.net.

11. Sieber, P. (1997). "Virtual Organizations: Static and Dynamic View Points", VoNet: The Newsletter, Vol 1, Iss 2. pp 3-9. Available: http://www.virtual-organisation.net.

12. Venkatraman, N. and Henderson, J. C. (1998). "Real Strategies for Virtual Organising", Sloan Management Review, Vol. 40, Iss. 1, pp 33-48.