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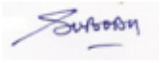
Message from Editor's Desk

Dear Booklover,

At the start of 2014, GJEIS has completed five years in a holistic manner as a research Journal both in print and digital format; including international listings in almost thirty directories in the world. I wish one and all a very **Happy New Year** and helping GJEIS accomplish this. I constantly trust that every passing year is an experience that we carry over to compose the successive year in a much more contented and extra momentous way in order to get pleased in each value. One would think similary that each one comes across ups and downs and in this frequency accent one would examine that the top-to-bottom and bottom-to-top approaches are balanced yet unique. So there are no ups without downs. This is also morale of life and a factual for every individual, institution, organization, nation, the world and the universe as a whole, so the only thing that is constant in this world is change.

The Internet is expanding beyond PCs and mobile devices into enterprise assets such as field equipment, and consumer items like cars and televisions. Bringing together personal clouds and external private cloud services is an imperative step in this route. Enterprises should design private cloud services with a hybrid future in mind and make certain future integration/interoperability which is achievable. Disseminating Enterprise, Information and Systems through www.gjeis.org is one of the mandates of GJEIS. It believes that an empowered thought builds an empowered nation and the road to empowerment leads through to achievement of knowledge. GJEIS with it's portal has served the society from underneath to pinnacle with the academic thoughts and future course of action.

I once again desire to perceive GJEIS widen into a computing journal with the equilibrium changing en route for research communication rather than remain a communiqué. All this can be accomplished from nonstop incessant indicators from our booklovers. We also appreciate the President, KARAM Society and Informatics Publishing Limited for providing the journal in a Camera-Ready-Shape and making GJEIS a global source to both academia and corporate sectors.



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Global Journal of Enterprise Information System

Existence of Equilibria and Complexity of Computation in Optimizing Complex Systems

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Abstract

This paper characterizes the generic properties of interior equilibria in complex systems. The field of complexity has been growing and is concerned with the complexity of computation of complex systems. Complex systems are characterized as systems with a large number of adaptive interdependent parts. These systems demonstrate several properties including: emergence, where the whole does not act as the sum of the parts, and sensitivity to initial conditions. As the number of economic factors increases, the recursion of input–output and modeling error propagates. These two particular symptoms of complex systems make them difficult to model. Solutions to optimization problems of this sort may have different properties depending on the functional assumptions. The generic properties of solutions to these problems can help us have some expectations over the complexity of computation. One example of a complex system is the Game Theoretic Interaction between economic agents. The paper also attempts to shed light on the complexity of computation of such systems.

Keywords: Complex Systems, Singularity Theory, Existence, Equilibrium, Optimization.

1. Introduction

The theory of complexity of computations is concerned with computational problems and evaluating their solution methods. Each method has its benefits and draws backs and is suitable to a specific kind of problem. This means that one can examine certain problems to determine which method performs best in terms of finding an accurate solution in feasible time for a type of problem. Problem types, however, need to be very specific for the method to perform for all instances of the problem. This poses a question: What are the generic properties of a problem and their solution sets that can be used to group problems into different levels of computational complexity[1]. For example, a problem that has a corner solution generically will not necessarily benefit from randomized search or steepest descent methods. This paper aims only to shed some light by a demonstrative example that uses singularity theory developed by Saari and Simone[2] to obtain generic properties of a solution space for optimization problems common in the static modeling of complex systems particularly the optimization of smooth differentiable functions.

Consider a system of 'n' parts all simultaneously optimizing. Question arises as to what are the generic properties of the solution to this particular problem and what are the consequences on the burden of computation when searching for it. This is often done by examples of particular problems, but they are often limited, because the properties of the solution space may change if the functional forms of the comprising system changes. It is useful to determine whether found properties of a solution concept hold good not just for a particular set of functions, but rather in general notion of being generic and "holding in general" usually means that the property holds for an open and dense set of utility functions, or at least for a countable intersection of open–dense sets.

The "denseness" condition ensures that it is general; because the closure of a dense set is everything, a property holding for a dense set is true almost everywhere. This allows us to make these generic statements about problems and their solutions.

Saari and Simon[2] developed a version of singularity theory to analyze the general properties of equilibria in the kinds of functions generally used in the social sciences viz, smooth differentiable functions. This basic approach is to find a general tractable method to describe static solutions of complex systems. The singularity theory approach relies on the properties of the implicit function theorem i.e., complex system equilibria defined by optima that are implicitly defined by the resulting first and second order conditions. Recovering the equilibrium strategies is essential, but only requires a standard tool, namely, the Inverse Function Theorem (IFT).

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To use the IMFT the optima must be defined in terms of the Space of Jets. The jet mapping takes a function 'F' and maps it into a space 'Jd' of degree 'd'. The space 'Jd' is a vector space that represents the domain, range, and up to 'F's dth derivative. In jet space, the higher order conditions imposed by the solution concept shape a surface in Euclidian Space. This surfaces' inverse image is the space of solutions. The inverse function theorem is powerful enough to tell us the dimension of the equilibrium space. This dimension can then be used to form an idea of how challenging the search would be for a solution.

Using this strategy yields an intuition that can be generalizable to classify the complexity of problems and the computation of their solutions. For example, the intuition that the number of constraints and unknowns will generically determine the dimension of the solution space is clear.

2. Jet Space

Consider the mapping F: $R^n \to R^m$, which has 'n' variables and 'm' equations f_i. Let J^1, the associated jet space with first order derivatives, be $J^1 = R^n \times R^m \times [R^n \times R^m]$. This can be considered as consisting of all possible domain points, all possible images, and all possible choices for the derivatives.

$\nabla F = (\nabla f_1, \nabla f_2, \ldots, \nabla f_m)$. A given map 'F' defines a mapping $j^1(F): R^n \subset J^1$ in the following natural manner: $j^1(F)(x) = (x, F(x), \nabla F(x))$. The equilibrium conditions we wish to impose on the function, when re–expressed in terms of J^1 variables, define the manifold $\Sigma \in J^1$.

To illustrate, suppose we are interested in the critical points of functions F: $R^2 \to R^1$. Here, $J^1 = ((x, y); z=F(x,y); (A_1, A_2))$, where $A_1 = \partial z/\partial x$, $A_2 = \partial z/\partial y \in R^1$. Critical point is where the partials of the function 'F' are zero. The equilibrium conditions can be re–expressed as the surface $\Sigma = ((x, y); z; (0, 0))$. If we could use the implicit function theorem, $j(f)^{-1}(\Sigma)$ would render all critical points of F.

Since, Game Theoretic Analysis is concerned with these special points, using jet space to describe optima may be a useful strategy.

Jet mapping can be used to transform the given information to space, that facilitates analysis key to the strategy. Just as important is to be able to take the answers back into the original space. This is done through the Inverse Function Theorem.

3. Inverse Function Theorem

The Inverse Function Theorem states that, if the total derivative of a function F: $R^n \to R^n$ is invertible at a point x (i.e., the determinant of the Jacobian of F at x is nonzero), and F is continuously differentiable near x, then it is an invertible function near x. That is, an inverse function to F exists in some neighborhood of F(x).

The Jacobian Matrix of F^{-1} at F (x) is then the inverse of the Jacobian of F, evaluated at p. We know that for a smooth mapping F: $R^n \to R^m$ and $x \in R^m$, then in general and locally $F^{-1}(x)$ is a n–m dimensional manifold.

So for n = m, expect $F^{-1}(x)$ to consist of isolated points. One can think of this as a system of equations and a number of unknowns. Since the number of equation is the same as the number of unknowns, one can easily find a unique solution. But, if m > n, in general, expect $F^{-1}(x)$ to be empty. Intuitively, this is clear because the number of equations is more than the number of unknowns. If n > m, expect $F^{-1}(x)$ to consist of n–m dimensional manifolds. It is clear that if the number of unknowns is bigger than the number of equations, then a system of equations has multiple solutions.

Instead of the inverse image of a point, suppose our interest is in the inverse image of a smooth manifold $\Sigma \subset R^m$ of dimension s. Here, the rank condition is replaced by a transversality condition. Namely, at a point $x \in \Sigma$, the linear space spanned by the tangent space $T_x\Sigma$ and the plane defined by:

$\nabla F(R^n)$ must have the full dimension 'm'. This shows as to why the results are local around the point of tangency. More importantly, the dimensionality of $F^{-1}(\Sigma)$ is n – [m – s]. Namely, the co–dimension of Σ defines the co–dimension of $F^{-1}(\Sigma)$. In other words, given that the transversality conditions are satisfied, the inverse function theorem will preserve the co–dimension of a smooth manifold.

4. Generic Transversality

To be precise for any given F, we would need to verify the transversality condition, but, if we are interested only in generic conclusions, then we are saved by an important result obtained by Thom[3]. By imposing an appropriate topology on the functions in function space, known as the Whitney Topology, Thom[3] proved for these jet mappings that, generically, either the mapping misses the target Σ or it meets it transversely. This means that once Σ is defined, if it can be established by some mapping that F allows its jet map to be in Σ, then generically the jet map meets transversely.

Definition 1: A smooth mapping F: $R^k \to R^m$ has a transverse intersection with a submanifold Σ of R^m if either (a) Image (F) $\cap$ Σ = φ or (b) the condition of transversality: S pan$[D_xF(R^n)$ S $T_y\Sigma] = R^m$ is satisfied for each X in F^{-1}.

We can now state Thoms[3] theorem.

Theorem 1 (Thom[3]): Let Σ be a smooth sub–manifold of R^m. Generically, a mapping F: $R^k \to R^m$ has a transverse intersection

with Σ (i.e., this is true for a countable intersection of open dense sets in the space of such mappings F).

Consequently, all of the above co–dimension comments are established generically. Saari and Simon[2] developed singularity theory on the space of preferences to analyze the mathematical structure of Pareto sets. This paper aims to apply their methodology to complex optimizing systems.

5. System Equilibirium

General system equilibrium in a large system of optimizing interrelated parts is the solution of simultaneous maximization of each function with respect to all 'k' inputs. The optimal solution for part 'i', call it $X^* = \text{argmax}, F_j(X_j, X_{-i})$; $X_j = (x_{j1}, \ldots, x_{jk})$.

System Equilbrium occurs when all 'n' parts simultaneously optimize. Naturally, maximization imposes second order conditions for the negative definiteness of the Hessian Matrix.

To characterize this equilibrium using jet space, we use the $J_2 = R^{nk} \times R^k \times R^{nk} \times [R^{nk} \times R^{nk}]$, to write the system of equations in terms of the first derivative conditions and second derivative conditions.

$$J^2 = (X; Y; A_{11}, A_{12}, \ldots, A_{nk}; B_{jil}) \; \forall \; j, i, l$$
$$(X \in R^{nk}; Y \in R^n, A_{ji} \in R^{nk}, B_{jil} \in R^{nk} \times R^{nk})$$
$$j = 1, 2, \ldots, n \quad i, l = 1, 2, \ldots, k$$
$$X^T = (X_1, X_2, \ldots, X_n)$$

$$X = \begin{pmatrix} x_{11} & x_{12} & \ldots & x_{1k} \\ x_{21} & x_{22} & \ldots & x_{2k} \\ . & . & . & . \\ . & . & . & . \\ . & . & . & . \\ x_{n1} & x_{n2} & \ldots & x_{nk} \end{pmatrix}$$

The matrix of inputs

$$\nabla F(X) = (\nabla F_1(X), \nabla F_2(X) \ldots \nabla F_n(X))$$

$$\nabla F_j(X) = \begin{pmatrix} \frac{\partial F_j(X)}{\partial x_{11}} & \frac{\partial F_j(X)}{\partial x_{12}} & \ldots & \frac{\partial F_j(X)}{\partial x_{1k}} \\ \frac{\partial F_j(X)}{\partial x_{21}} & \frac{\partial F_j(X)}{\partial x_{22}} & \ldots & \frac{\partial F_j(X)}{\partial x_{2k}} \\ . & . & . & . \\ . & . & . & . \\ . & . & . & . \\ \frac{\partial F_j(X)}{\partial x_{n1}} & \frac{\partial F_j(X)}{\partial x_{n2}} & \ldots & \frac{\partial F_j(X)}{\partial x_{nk}} \end{pmatrix}$$

$$\Sigma_2 = \{(X; Y; A_{ji}; B_{ji}) \mid A_{ji} = 0, B_{ji} < 0 \; \forall i, j\} \qquad (1)$$

In this representation and with the jet map, $Y = [y_1, y_2, \ldots, y_n]$ and A_{ji} correspond to $\frac{\partial F_j}{\partial x_{ji}} \in \nabla F(X)$. The positive definiteness of Hessian Matrix insuring the optimization condition is represented through the correspondence between B_{ji} and $\frac{\partial^2 F_j}{\partial x^2_{ji}} \in \nabla^2 F(X)$.

Then the co–dimension of Σ_2 in the jet space will be 'r' which is the number of closed restrictions in the space of Jets. Consider the co–dimension of optimality restrictions implied by the first order condition $A_1, \ldots, A_n$. There are 'nk' restrictions. Given Generic Transversality, the Inverse Function Theorem preserves the co-dimension. By the findings of Saari[4], to back out the dimension of the equilibrium subspace, we compare the dimension of the domain 'nk' to the co–dimension 'r' of Σ_2 in the jet space J_2.

Since, $r = n^*k$, the co–dimension of the critical points in strategy space is nk–nk = 0. This means that generically, the interior equilibria of a complex optimizing system are isolated points so they do not trace a curve.

Theorem 2: For a complex system S(N,F,X), where N is the set of optimizing system parts and contains n>1 parts, F is differentiable and $\nabla F(X) = (\nabla F_1(X), \nabla F_2(X), \ldots, \nabla F_n(X))$ and $X^T = (X_1, X_2, \ldots, X_n))$ where $X_j = [x_{11}, x_{12}, \ldots, x_{1k}]$, generically, interior system equilibria are isolated points and the space of boundary solutions is of dimension nk.

Proof 1: d = Dimension of the Input Space Co–dimension (Σ_2). $d = nk - n^*k = 0$.

Notice that at the boundary points the first and second order conditions are not binding. Then the equilibrium subspace, Σ, has to be rewritten as: $\Sigma_0 = (X; F(X))$ Therefore, $d_{boundary} = nk$.

In the boundary solution case, there is not a single constraint. Consequently, in general, the conditions for boundary point solutions can be expected to be (locally) satisfied along some collection of curves in R^{nk}. However, this proves that generically, interior system equilibria exists and are isolated points. In other words, if X^* is a critical point for F, then in any sufficiently small neighborhood of X^* there are no other critical points of F (X). This also means that imposing any other restrictions may affect the existence of the equilibrium.

The next section considers the consequences of this result on computation and searching for a solution.

6. Complexity

In this section the paper will examine both the complexity of systems and complexity of computation. Generally speaking, as more parts are introduced to the system, and as the number of inputs increase, the system becomes more complex. However, when concerned with the searching of the solution of the system optimization, we can use the results of this paper to give more guidance to computational complexity. Computational complexity of optimizing complex system would depend on the search space and on the dimension of the solution space.

If the solution space covers the search space then the problem is quite simple. If the solution space is a two dimensional curve in a large three dimensional search space, then it is the proverbial needle in a hay stack. If as in the theorem above, the solution space is a point in the search space, then generically it is a grain in a haystack. For example, generically in large spaces the search time may be long to locate these isolated points longer than if the solution space traced a curve for example. More importantly, any additional binding restrictions would generically jeopardize the existence of the solution meaning the search algorithm would be wasting its time searching for an interior equilibrium when the right search would be on the boundary.

7. Conclusions

Since much of the research on complexity of computation is being done on examples of problems, especially when trying to look at **P** versus **NP**, the analysis suggests that generic properties of solutions (for some problems) the number of binding constraints may make the solutions space so small compared the search space it may lead to large search time. This suggests that computational complexity could be the difference between the dimension of the search space and dimension of the equilibrium subspace Σ. When d = nk, the complexity of computation C(d) = 0. When d is negative, the interior solution does not exit; then a interior search would take up valuable computation time and only ends with the probability depending on the number of searched points in the area of the boundary of nk−1 dimensions over the total number of searchable points in the space of nk dimensions. Likewise, when d > 0, the number of points in the solution subspace $\in R^{nk}$ over the number of points in the search space of dimension R^{nk} would be relevant to finding a solution.

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Retailing Trends and Opportunities of China's Products in Indian Market

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Abstract

The aim of this study is to bring to light the scope & behavior of Chinese foods and products in the Indian retailing market. Mostly Asian countries have adopted economic policies which are encouraging rapid growth for making a presence in the international marketplace. In India, FDI permitted in retail sector for foreign groups is up to 51 per cent for 'multi-brand retailers', and 100% for single brand retailers. This decision has led to an increasing presence of international retailers. In this study respondents have been categorized into three groups 1st (managerial, administrative, or professional), 2nd (semi skilled, businessman) and 3rd (teen agers students, coupled with rising incomes). In addition, growth of an economy creates better opportunities for capable people, and affects their lifestyle, shopping behavior and eating habits. So Mostly retailers serve meals which are easy to cook and are delivered fast like pizza, burger, momos, fast foods, cold drinks and Chinese food.

A faster inspection of the preferences and lifestyle of Indian consumers during momentous segmentation strategies can serve as basis for successfully competing in India's retail sector. Health-related anxiety, non vegetarians and coupled with rising incomes in India, is without delay to seek & preference to the more hygienic retail conditions.

Keywords: Fast Foods, Life Style, Eating Behavior, Economic Reforms

1. Introduction

The accelerated economic growth of both China and India in recent years has been the focus of significant policy discussion and analysis. China's economic growth is mainly due to manufacturing sectors, while India's growth has been through services sectors like Information Technology (IT). It has accumulated more than 500 billion dollars in reserves both throughout the growth export, especially in service sectors like IT and ITES and by attracting all types of investment (stock- market, private equity fund and foreign direct investment) in India. As both of these countries look to sustain their growth, China is determined to increase its presence in IT, while India attempted to be a stronger player in manufacturing industries. For achieving these respective goals both countries will be required to take ample policy actions, which creates employment opportunities. It will have a multi-effect on living standards, eating habits and demand for consumer durables & luxurious items etc.

2. Impact of Economic Reforms and Patterns of Consumption and Income

While India's political freedom is more than 60 years old, its economic freedom is only 20 years old. In 1991, the government neglected the planned social economy model which was labeled as the 'License Raj' in favor of capitalist market economy. It has also produced several large new enterprises such as Reliance, Infosys and Bharti as well as reenergized traditional business groups including Tata and Birla and many public sector units, like Coal India, Maruti, SBI and LIC. The combined market capitalization of these enterprises since 1991 is nothing short of spectacular. Finally, Indian economy is progressively getting globally integrated both economically and politically.

After economic reforms in 1990–91, it has also generated new self-confidence and 'can do' attitude among its educated class as well as illiterate masses. In fact, nothing seems to be impossible if you are an Indian or in India. It has produced altogether new large global enterprises, like Mittal, DLF, Reliance, Bharti, Dr. Reddy's, Ranbaxy, Infosys, Hindalco, ONGC, Wipro, TCS, and many more.

An economic reform has created a new middle class; like BPO Industries couple: both husband and wife is college colleague, both have to work, and they neither wants their parents to live with them because they like to enjoy their privacy and freedom. The call center couple does not want to shop from the traditional merchant or the neighborhood provision Kirana, who gives home delivery for daily groceries and toiletries with a monthly account settlement. Instead, BPO's couple wants to shop at a modern

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organized retailer such as Big Bazaar and Metro, which offer branded, quality products (both domestic and imported) with fixed prices and checkout counters that accept credit cards for payment.

The high-income group (rich), which accounted for just 20 per cent of the total world population, had the consumption level at 76.6 per cent. The middle-income group (working class) accounted for 60 per cent of the world population, but it had a consumption percentage of 21.9 per cent. The low-income group (poor) included 20 per cent of the world population and constituted a meager 1.5 per cent of the total consumption.

China's Industries try to fulfill the requirements of low-income group people at lowest price of products. It is no more a hypothesis that middle, lower income groups are also potential markets, and these categories are not only treated as consumers but as a stable low-cost producer. It completes the economic modeling with Inclusiveness. In current situation, only emerging market are Underfed, they will also contribute 3 billion people, and more than 40% of global population to the middle class by 2050.

3. Outsourcing from China

Due to economic reforms and Purchasing Power Parity, India will become the second (and, in some instances, the first) largest consumer market in many products and services exceeding the United States, Japan and Germany which includes cell phones, consumer electronics item, home appliances, garments, two wheelers motorcycles & scooters, beverages, ready to eat foods, and agriculture products such as fruit, vegetables and grains as well as dairy products including milk, cheese and butter. All the above products as well as its parts are being imported or outsourced from China because of their availability at low cost. As the second largest market in the world, it has attracted global enterprises from around the world to make and market locally. Global IT industry including IBM, Accenture, Microsoft, Google, Cisco Systems and Intel has invested due to the success of its technical education. As India graduates between 1, 50,000 and 2, 00,000 engineers each year and has more than twice the number of annual college graduates of the United States[6]. According to the World Bank[7] 'Doing Business in India' report, it is difficult to do business in India than China. In 2004, it takes 89 days to start a business in India, but in china only took 41 days to start a business. Therefore, India will have to sort-out the problem of delay in procedural works for approval and documentations of business. So, what should be done to maximize its resource strengths and minimize its heritage disadvantage? First, India needs a sense of urgency and purpose. Its 'chalta hai' culture, especially in the government bureaucracy and political leadership needs to be changed to a mission-driven deployment of its abundant resources.

For China to increase its IT sector, it has to focus on current IT industry on global exports; spur entrepreneurship and reduce dependence on central government; create a strong trade association to improve regulatory environment; and improve quality and approach of educational system. In other hand, India will have to improve its manufacturing sector by increasing or attracting its FDI inflows for manufacturing and improve basic infrastructure. India has major weakness of lack of modern infrastructure, throughout the value chain since from production to consumption. This includes modern seaports, cargo airports, logistics and high-speed roads. Without a strong manufacturing base, a nation cannot become a global sourcing destination despite the fact it has large domestic market.

4. Methodology

In this paper, researcher has evaluated the attitude of China's product in Indian market. Researcher has conducted survey among 100 respondents (Delhi & NCR) for identifying the behavior & trend of electronics products, toys etc. and specially food products. The analysis has been done by using SPSS 17. Researcher has taken 11 attribute for china's electronic products (Affordable, Availability, Substitute, Chale to Chand tak nahi to Sam tak, Preference, Low Product Cost, Latest Technology, Maintenance, Features, Festival, Not reliable) and 10 Chinese food (Chowmein, Eggroll, Fried rice, Soup, Bun, Broccoli, Manchurian, Pasta, Momos, Burger).

Stability analysis, reliability analysis has been applied to determine the internal consistency of the product's attribute. Internal consistency of the items has been measured by using Cronbach's alpha coefficient. The items considered will represent an acceptable level of internal consistency if the Cronbach's Alpha value is within 0.4 to 0.7 and will represent a good level if the Cronbach's alpha value is more than 0.7. See Table 8 (0.491) The Cronbach's alpha value for the China's electronic products subscale ranged between 0.36 and 0.51, indicating a poor acceptable level of internal consistency across multiple measurements.

5. Result

5.1 Factor Analysis (China's electronic products)

The Principal Component Analysis (PCA) has been used for data extraction. It has extracted 03 attributes for factor analysis out of

Table 8. Reliability statistics

Cronbach's Alpha	Cronbach's Alpha based on standardized items	No of items
.491	.479	11

the 11 attributes. 11 factors were rotated to identify the important group of factors. Only those factors have been retained which have an Eigen value more than 01. An Eigen value represents the amount of variance associated with the factor. The result was retained by 03 factors, which has the Rotation Sums of Squared Loadings (83.248%) of the total variance (Table 12).

The Cronbach's alpha value for the China's electronic products subscale ranged between 0.36 and 0.51, indicating poor acceptable level of internal consistency across multiple measurements.

Each item is rated based on five Likert-scales range between 1 and 5 (1 = strongly disagree, 2 = disagree, 3 = unsure, 4 = agree, and 5 = strongly agree).

The Cronbach's alpha value for the 1st factors (0.559) (Table 14) subscale ranged between 0.36 and 0.55, indicating poor to acceptable level of internal consistency across multiple measurements. The Cronbach's alpha value for the 2nd factors (0.712) (Table 14) subscale ranged between 0.70 and 0.80, indicating good level of internal consistency levels across time and occasions. The Cronbach's alpha value for the 3rd factors subscale (0.835) (Table 14) ranged between 0.79 and 0.85, indicating good level of internal consistency across measurements.

5.2 Factor Analysis (Chinese food)

The Principal Component Analysis (PCA) has been used for data extraction. It has extracted 04 attributes for factor analysis out of the 10 attributes. 10 factors were rotated to identify the important group of factors. Only those factors have been retained which have an Eigen value more than 01. An Eigen value represents the amount of variance associated with the factor. The result was retained by 04 factors, which Rotation Sums of Squared Loadings (87.799%) of the total variance (Table 15).

Each item has been rated based on seven Likert-scales which has a range between 1 and 7 (1–Not a priority, 2–Low priority, 3–Somewhat priority, 4–Neutral, 5–Moderate Priority, 6–High priority, 7–Essential priority).

The Cronbach's alpha value for the 1st factors (0.783) & 4th factors (0.701) (Table 16) subscale ranged between 0.70 and 0.80, indicating good level of internal consistency across multiple measurements. The Cronbach's alpha value for the 2nd factors (0.894) (Table 16) ranged between 0.79 and 0.90, indicating good level of internal consistency across measurements.

The Cronbach's alpha value for the 3rd factors subscale (0.572) (Table 16) subscale ranged between 0.36 and 0.59, indicating

Table 14. Internal consistency level

Component	China's product attitude	Factor loading	Cronbach's Alpha
1	Substitute	0.536	0.835
	Chale to Chand tak nahi to Sam tak	0.643	
	Features	0.867	
	Festival	0.634	
2	Not reliable	0.916	0.712
	Maintenance	0.744	
	Preference	0.872	
	Substitute	0.542	
3	Affordability	0.533	0.559
	Availability	0.812	
	Chale to Chand tak nahi to Sam tak	0.575	

Table 12. Total variance explained

Component	Initial Eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.419	40.172	40.172	4.419	40.172	40.172	3.686	33.507	33.507
2	2.477	22.522	62.693	2.477	22.522	62.693	3.002	27.289	60.796
3	2.261	20.554	83.248	2.261	20.554	83.248	2.470	22.452	83.248
4	.840	7.635	90.883						
5	.660	6.002	96.885						
6	.234	2.131	99.016						
7	.108	.984	100.000						
8	1.876E–15	1.706E–14	100.000						
9	5.797E–16	5.270E–15	100.000						
10	7.598E–17	6.907E–16	100.000						
11	–6.328E–16	–5.752E–15	100.000						

Extraction Method: Principal Component Analysis.

Table 15. Total variance explained

Component	Initial Eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.538	35.377	35.377	3.538	35.377	35.377	2.973	29.727	29.727
2	2.330	23.305	58.682	2.330	23.305	58.682	2.249	22.494	52.220
3	1.869	18.688	77.370	1.869	18.688	77.370	2.182	21.817	74.037
4	1.043	10.429	87.799	1.043	10.429	87.799	1.376	13.762	87.799
5	.676	6.758	94.557						
6	.503	5.030	99.587						
7	.041	.413	100.000						
8	3.366E–16	3.366E–15	100.000						
9	–1.170E–16	–1.170E–15	100.000						
10	–1.455E–15	–1.455E–14	100.000						

Extraction Method: Principal Component Analysis.

Table 16. Internal Consistency Level (Chinese food attitude)

Component	Chinese food attitude	Factor loading	Cronbach's Alpha
	Soup	0.868	
1	Manchurian	0.538	0.783
	Burger	0.801	
2	Momos	0.894	0.894
	Chowmein	0.514	
3	Eggrolls	0.821	0.572
	Manchurian	0.742	
4	Pasta	0.701	0.701

Table 1. Gender profile of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	M	60	60.0	60.0	60.0
	F	40	40.0	40.0	100.0
	Total	100	100.0	100.0	

Table 2 Age group of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	18–23	30	30.0	30.0	30.0
	24–29	51	51.0	51.0	81.0
	30–35	9	9.0	9.0	90.0
	41<	10	10.0	10.0	100.0
	Total	100	100.0	100.0	

poor acceptable level of internal consistency across multiple measurements. Small vendors/Street vender's are more selling fast foods[3]. The emerging Southeast Asian markets are still dependent on traditional and inefficient distribution and retailing systems[4].

6. Conclusion

An economic reform has created a new middle class; like service sector, BPO Industries couple: both husband and wife is college colleague, both have to work, and they neither want their parents to live with them because they like to enjoy the privacy and freedom. Chindia rising is a highly useful guide to national and international economics for students and practitioners of both business and politics[1]. Success of any product depends on the Identification of key factors as the changing basis and use of retail power in the distribution channel, the centralization of management activities, and the appreciation of what constitutes retail image[2]. Researcher has used 11 attribute for the success and growth of china's electronic products (Affordable, Availability, Substitute, Chale to Chand tak nahi to Sam tak, Preference, Low product cost, Latest technology, Maintenance, Features, Festival, Not reliable) Table 14. Mostly has given his statements for the products not reliable, low product cost etc. thus china's have to make qualitative product for the Indian consumers. 20 years is a long time in retail trends, given the technology changes and emerging-market growth that are continuing to cause consumer habits to change. Attitudes has three components, they are cognitive, affective and behavioral[9]. Fishbein's and Ajzen[9] elaborate: "Cognitive component of an attitude reflects underlying beliefs, opinions, knowledge or information a person possesses 60%. male & 40% and below 29 years are preferred more fast foods (Table 1 & 2).

India is growing countries and more competent in the field of IT and IT enabled industries which attract youngster as a carriers. 91% of respondents from single, couple and in living relations are working in BPO and Academic Profession (As Students) with different income category (Table 3–5). Mostly respondents are living with family 56% (Table 6). 11 factors of Chinese product effect the purchasing decision of customers (Table 7).

Due to new middle class consumers their food preferences has also changed. Mostly younger's shopping behavior influenced by advertisement and promotional scheme[5] Researcher has used 10 Chinese foods (Chowmein, Eggroll, Fried rice, Soup, Bun, Broccoli, Manchurian, Pasta, Momos, and Burger) among 100 respondents Table 16. They mostly liked Chowmein, Soup, Manchurian, Momos, Burger and Eggroll because of easily available and ready to cook.

Table 3. Marital status of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Single	40	40.0	40.0	40.0
	Couple	15	15.0	15.0	55.0
	Lr	36	36.0	36.0	91.0
	Married	9	9.0	9.0	100.0
	Total	100	100.0	100.0	

Table 4. Job Profession of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Student	19	19.0	19.0	19.0
	BPO	62	62.0	62.0	81.0
	Mfg	14	14.0	14.0	95.0
	Business	5	5.0	5.0	100.0
	Total	100	100.0	100.0	

Table 5. Income of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	<1.5L	19	19.0	19.0	19.0
	1.5L–3.0L	21	21.0	21.0	40.0
	3.0L–4.5L	30	30.0	30.0	70.0
	4.5L<	30	30.0	30.0	100.0
	Total	100	100.0	100.0	

Table 6. Accomodation of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	PG	19	19.0	19.0	19.0
	Rented With Friends	25	25.0	25.0	44.0
	With Family	56	56.0	56.0	100.0
	Total	100	100.0	100.0	

Table 7. Descriptive statistics (Characteristics of China's product)

	N	Minimum	Maximum	Mean	Std. Deviation
Maintenance	100	1.00	4.00	1.6900	1.08892
Availability	100	1.00	5.00	2.4800	1.16758
Substitute	100	1.00	5.00	2.6900	1.07961
Preference	100	1.00	5.00	2.7900	1.43756
Low product cost	100	1.00	5.00	3.2300	1.42031
Latest technology	100	1.00	5.00	3.2600	1.31518
Features	100	1.00	5.00	3.3500	1.30558
Not reliable	100	1.00	5.00	3.4100	1.38604
Chale to Chand tak nahi to Sam tak	100	2.00	5.00	3.6500	1.10440
Festival	100	2.00	5.00	4.1100	.98365
Affordable	100	4.00	5.00	4.4900	.50242
Valid N (list wise)	100				

Table 9. Correlations transformed variables (characteristics of China's product)

Dimension:1												
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Male**
Affordable	1.000	.593	.594	.589	.713	.915	.561	.424	.724	.611	.674	.024
Availability	.593	1.000	1.000	.807	.898	.634	.805	.384	.797	.938	.961	.140
Substitute	.594	1.000	1.000	.809	.897	.637	.803	.381	.801	.934	.957	.152
Chale to Chand tak nahi to Sam tak	.589	.807	.809	1.000	.927	.697	.968	.525	.956	.826	.824	.245
Preference	.713	.898	.897	.927	1.000	.823	.905	.566	.941	.936	.953	.220
Low product cost	.915	.634	.637	.697	.823	1.000	.678	.361	.831	.707	.725	.310
Latest technology	.561	.805	.803	.968	.905	.678	1.000	.513	.951	.877	.835	.140
Maintenance	.424	.384	.381	.525	.566	.361	.513	1.000	.561	.524	.545	–.492
Features	.724	.797	.801	.956	.941	.831	.951	.561	1.000	.862	.840	.199
Festival	.611	.938	.934	.826	.936	.707	.877	.524	.862	1.000	.978	.047
Not reliable	.674	.961	.957	.824	.953	.725	.835	.545	.840	.978	1.000	.053
Gender[a]	.024	.140	.152	.245	.220	.310	.140	–.492	.199	.047	.053	1.000
Dimension	1	2	3	4	5	6	7	8	9	10	11	
Eigen value[b]	8.681	.869	.772	.469	.113	.065	.031	.000	.000	.000	.000	

a. Supplementary variable.
b. Eigen values of correlation matrix excluding supplementary variables.

Table 10. Correlations transformed variables (characteristics of China's product)

Dimension:2												
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Female**
Affordable	1.000	.020	–.004	–.093	–.001	.070	–.004	.256	–.010	.057	.161	–.024
Availability	.020	1.000	.984	.895	.744	.744	.988	.640	.982	.829	.806	.939
Substitute	–.004	.984	1.000	.950	.778	.763	.967	.690	.975	.783	.815	.895
Chale to Chand tak nahi to Sam tak	–.093	.895	.950	1.000	.824	.628	.903	.790	.910	.757	.822	.815
Preference	–.001	.744	.778	.824	1.000	.350	.766	.580	.755	.584	.583	.691
Low product cost	.070	.744	.763	.628	.350	1.000	.652	.274	.699	.532	.684	.640
Latest technology	–.004	.988	.967	.903	.766	.652	1.000	.698	.987	.869	.806	.936
Maintenance	.256	.640	.690	.790	.580	.274	.698	1.000	.704	.646	.680	.534
Features	–.010	.982	.975	.910	.755	.699	.987	.704	1.000	.817	.768	.878
Festival	.057	.829	.783	.757	.584	.532	.869	.646	.817	1.000	.915	.895
Not reliable	.161	.806	.815	.822	.583	.684	.806	.680	.768	.915	1.000	.851
Gender[a]	–.024	.939	.895	.815	.691	.640	.936	.534	.878	.895	.851	1.000
Dimension	1	2	3	4	5	6	7	8	9	10	11	
Eigen value[b]	7.960	1.130	.823	.499	.322	.241	.026	.000	.000	.000	.000	

a. Supplementary variable.
b. Eigen values of correlation matrix excluding supplementary variables.

Table 11. Model summary of respondents (male & female)

Dimension	Cronbach's Alpha	Variance Accounted For		
		Total (Eigen value)	Inertia	% of Variance
1	.973	8.681	.789	78.920
2	.962	7.960	.724	72.361
Total		16.641	1.513	
Mean	.968[a]	8.320	.756	75.640

a. Mean Cronbach's Alpha is based on the mean Eigen value.

Table 13. Component matrix

	Component		
	1	2	3
Affordable	−.745		.575
Availability			.812
Substitute	.536	.542	
Chale to Chand tak nahi to Sam tak	.643		.533
Preference		.872	
Low product cost	−.869		
Latest technology	−.585		
Maintenance		.744	
Features	.867		
Festival	.634		
Not reliable	.916		

Extraction Method: Principal Component Analysis.
a. 3 components extracted.

Table 17. (India Vs China) China and India comparison of key indicators

Indicators	India	China
Size of Population	1.22 billion	1.33 billion
Type of Government	Democracy	Communist State
Consumer expenditure per head:	US$767	US$1,834
Manufacturing as a % of GDP	16%	53.3%
Services as a % of GDP	51.5%	32.2%
FDI Inflows (2012–2013)	$59.1 billion	$10.4 billion
GDP per head	US$1,540	US$6,190

The Economist Intelligence Unit Limited 2013[8].

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Determining Job Satisfaction among the Faculty Members in Private Education Institutions

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Abstract

The academicians are the poles in the growth of any country as they put their efforts for growing the people who ultimately lead to a prosperous economy, so the present study is based on the job satisfaction among the faculty members in various institutions.

The findings of the research would provide valuable information to the administrators in understanding the factors that affect job satisfaction. This study would assist the administrators in creating conducive working environment so as to increase job satisfaction, hence work commitment.

Knowing the factors that can contribute to job satisfaction among faculty members would facilitate the Ministry of Higher Education in making decisions pertaining to the profession so as to benefit the faculty members and hence the society.

Keywords: Job Satisfaction, Model, Leadership Behavior, Rewards, Working Environment.

1. Introduction

"If you want one year of prosperity, grow grain. If you want ten years of prosperity, grow trees. If you want hundred years of prosperity, grow people."

Job satisfaction is a highly researched area of enquiry and is an outcome of a motivated workforce. The majority of job satisfaction studies in the last 80 years, since it was pioneered, have focused on industrial and organizational settings[5]. Job satisfaction has been defined as how content an individual is with his or her job. It can be said that the happier the person is in the work setting, the more satisfied he/she will be with the job. Locke[10] defines job satisfaction…"A pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences".

2. Purpose and Objectives of the Study

The purpose of study was to examine factors affecting job satisfaction of faculty members at graduation and PG level of University and Institutions (Government and private) in Delhi and Haryana. In addition, this study sought to determine the overall job satisfaction of faculty members. To understand about this study the following research objectives were formulated:

- To determine the main factors that contributes to job satisfaction among faculty members.
- To describe the overall level of job satisfaction among faculty members.
- To suggest the techniques and tools to increase the satisfaction level of faculty members.
- To suggest a model of job satisfaction by linking the most influencing parameters.

3. Literature on Job Satisfaction

According to Meyer and Evans[9], their internal motivation and the particular importance they attribute to the characteristics of the academic profession (such as autonomy and flexibility) counter balance the multiple requirements, the strong pressures, the animadversions and the poor financial rewards.

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Actually, flexibility and autonomy have been considered as key factors in becoming and remaining an academic[3].

Malik[11] quoted "A Study on Job Satisfaction Factors of Faculty Members at the University of Balochistan", found that the faculty members were generally satisfied with their jobs. However, male faculty members were less satisfied than female faculty members. The factor "work itself" was the most motivating aspect for faculty.

Results of study, "Job satisfaction of Greek university professors: Is it affected by demographic factors, academic rank and problems of higher education?", conducted by Platsidou and Diamantopoulou[10]) showed that the Greek academics were moderately satisfied with their job; no statistical significant effects of the demographic factors (such as age, gender, working experience and marital status) were found.

The study, "Modelling Job Satisfaction and Work Commitment among Lecturers: A Case of UiTM Kelantan", conducted by Awang[3], confirmed that job satisfaction has a strong positive relationship with work commitment. In universities, just as in other organizations, committed staffs are the organizations' invaluable assets.

4. Research Methodology

The present study is a scientific and systematic search for pertinent information on: "Determining Job Satisfaction among Faculty Members in Private Education Institutions". A questionnaire was constructed. The population for this study comprised faculty members from Haryana and NCR and in Haryana-Sonipat and Rohtak. Subjects were 100 Graduates and Post Graduate level faculty members (Government and Private) of Universities and Institutions, who responded to the questionnaire on job satisfaction. The sample was selected randomly. The sample comprised of 100 faculty members.

To compare and measure the job satisfaction, 56 items and sub-items and about 4 basic job satisfaction dimensions and some demographic questions were included. The job dimensions are as follows:

1. Leadership (15 items);
2. Motivation (9 items);
   a. 9th item with 15 sub-items
3. Rewards-Wages and Benefits (7 items);
   a. 2nd item in Wages with 3 sub-items
   b. 7th item in Benefits with 4 sub-items
4. Expectations (6 items);

A five point Likert scale of measurement weighted as follows: 1 = "Very Dissatisfied", 2 = "Dissatisfied", 3 = "Somewhat Satisfied", 4 = "Satisfied" and 5 = "Very Satisfied" was used and respondents were asked to tick the response.

The present study is descriptive and exploratory in nature, so that a precise investigation could be done about the job satisfaction among the academicians in private education institutions. The data was collected by designing a structured questionnaire[6].

5. Hypothesis

Hypothesis is usually considered as the principal instrument in research. Its main function is to suggest new experiments & observations. Based on literature review and previous studies, this research hypothesized that:

H1: There is no statistically significant correlation between gender satisfactions and leadership behavior.
H2: Motivation has a significant impact on job satisfaction among faculty members.
H3: Rewards has a significant impact on job satisfaction among faculty members.
H4: Job expectations don't have a significant impact on job satisfaction among faculty members.

6. Data Analysis and Interpretation Procedure

The data is collected by the help of questionnaire as mentioned earlier. The questionnaires were distributed manually by visiting the universities and institutions or colleges and collected the same over two month period of time.

6.1 Results

Results are based on the responses given by 100% full time and regular faculty members working in government or private universities/institutions/colleges.

The normality of data has been analyzed through Levine's test; Skewness and Kurtosis are also observed and their value lies between +1 and −1. The test for normality of data concludes that data is normally distributed.

To find out relationship between variables Pearson Correlation test is applied and it is found that the value of 'r' lies between +1 and −1. Correlation of 'Y' (job satisfaction among faculty members), is tested one by one with all the independent variables namely leadership, motivation, rewards, job expectation, job organization and working environment represented by X_1, X_2, X_3, and X_4, respectively. Also the hypothesis which were defined earlier are accepted or rejected on the basis of value of p (where $p > 0.05$).

Job satisfaction among faculty members has positive correlation with the leadership behavior of their HOD's/Deans[4]. Correlation of faculty members with leadership shown the value of $r = 0.272$, and $p = 0.006$. As value of $p = 0.006$, <0.005, so null hypothesis of no correlation can't be accepted. It means job satisfaction among faculty members is having statically significant impact on leadership behavior of their department heads. It proves hypothesis H_1.

As the value of $r = 0.182$, so there is positive correlation between job satisfaction among faculty members and their motivation level. The value of $p = 0.189$ (>0.05), hence the hypothesis (H_2) is accepted.

When job satisfaction among faculty members (Y) is taken as dependent variable and rewards as independent variable, value of $r = 0.167$ indicates a positive correlation between these two variables, and $p = 0.097$ (>0.05) indicates that gender has significant impact over the rewards, and hence hypothesis (H_3) is accepted.

Now, correlation of Y (job satisfaction among faculty members) is tested with X_4 (job expectation) and results obtained are $r = 0.098$, and $p = 0.334$, which leads to the interpretation that there exists a positive correlation between the parameters taken for test above and the hypothesis H_4 is rejected (as value of $p>0.05$), and its alternative hypothesis is accepted which states that job satisfaction among faculty members has a significant impact on expectations of faculty members which they expect from their job.

7. Model of Job Satisfaction [by using Four Variables (X_1–X_4)]

In model building we go for applying linear regression analysis and check the conditions as follows:- (i) If addition of a variable leads to increase in the adj R^2, then that variable is included whereas (ii) if the inclusion leads to decrease in the value of adj R^2, that particular variable was removed.

R is regression (correlation between dependent and independent variable; R^2 measure of common variance, called coefficient of determination i.e. proportion of variance in dependent variable due to independent variable.

7.1 Interpretation of Result

From Table 1 it can be observed that when all the variables are taken together, the value of $R^2 = 25.8$ and of adj $R^2 = 21.0$.

(i) If X_1 is removed, value of both R^2 and adj R^2 decreases, so it is advisable that removal of X_1 will not lead to a better model. So, X_1 should not be removed.

(ii) If X_2 is removed the value of adj R^2 increase, it means model would be better if X_2 is removed. Therefore, X_2 variable should be excluded from the present model.

(iii) If X_3 is removed, again value of R^2 and adj R^2 decreases, so X_3 should not be removed.

(iv) If X_4 is removed the value of adj R^2 increase, it means model would be better if X_4 is removed. Therefore, X_4 variable should be excluded from the present model.

So, the model represented in (Figure 1) is best as per the survey.

Table 1. Summary of model

Condition	R^2	adj R^2	F	Interpretation
When all the variables are taken together (Y, X_1–X_4)	25.8	21.0	5.384	
If X_1 is removed	7.4	6.4	7.814	Don't remove
If X_2 is removed	25.1	21.1	6.180	Remove
If X_3 is removed	20.6	17.2	6.147	Don't remove
If X_4 is removed	24.8	22.4	10.540	Remove

Figure 1. Proposed job satisfaction model.

In mathematical form, the model can be further represented as:

$$Y = X_1 + X_3 \quad (A)$$

where, Y = job satisfaction among faculty members;

X_1 = Leadership behavior;

X_3 = Rewards designed for the faculty members; and

In general,

$$C = \alpha + \beta I + \varepsilon \quad (B)$$

where, C = Dependent Variable;

α = Standard α error which is permissible;

B = Standard β error which is used to analyze Comparative influence;

I = Independent Variable;

ε = Standard error which is permissible

$$\therefore Y = \alpha + \beta_1 X_1 + \beta_2 X_3 + \varepsilon \quad (C)$$

Hence,

$$Y = 1.285 + 0.232\ X_1 + 0.253\ X_3 \quad (D)$$

This model is termed as fit, because when these three variables were taken together the value of $R^2 = 24.8$, adj $R^2 = 22.4$, F = 10.540, and t = 6.224. F is measure of goodness of fit and if the value of F > 4 for any model then that model is considered significantly fit. Hence, we can see from the results obtained above that F > 4, the model generated is significantly fit.

This model may also work best in other fields besides the education sector to explain the job satisfaction among the faculty members of Government/private universities and the various other institutions.

8. Scope and Limitations of the Study

The research is conducted on various University and Institutions faculty members in Haryana and NCR. Thus, the results may be generalized to other professions as well as faculty members in other higher learning institutions of other states. As with other research that uses questionnaire as the instrument to collect data, there may be a problem of social desirability. Some respondents may have the tendency to exaggerate or provide responses deemed to be desirable by others, instead of giving honest responses.

9. Conclusion

The survey reveals that job satisfaction among the faculty members is influenced by three variables namely leadership behavior of their heads, rewards they receives for the work done by them, and the working environment of the organization, which implies that:

- Leadership behavior of the head of the departments/dean/ the immediate authority is having influence on the job satisfaction among the faculty members which considers some of the facts like the relationship with immediate head, the amount of attention a faculty members gets from the head for the work they do, easiness in communicating, if faculty members get sufficient amount of information to complete a particular task, the amount of constructive feedback received from the head, information received from the head about the situation of the university/institute, the amount of appreciation got from the head of the work done by the faculty member, the awareness level of the head about the abilities of the faculties, style of head's directions, the support got form head, management style adopted by the head in dealing with the faculty members, the amount of time given by the head to listen to faculty concerns and support on reasonable suggestions, assistance received from the head in planning the essential training to help faculty members to perform their task efficiently and to take further steps in research for their career advancement, and finally the knowledge level of the head regarding all aspects of job responsibilities of the faculty members.
- Rewards which are designed for the faculty members are also having a remarkable impact on the job satisfaction which includes the salary and other benefits like satisfaction with the current salary, fairness of the salary system in their university/institute compared to the work they do, other faculties working in the same area, library with modern facilities support in doing research work, support for attending conferences and faculty development programmes, and other benefits like theatre, vacations, interesting projects, support, appreciation, working hours, insurance, health care, child care etc. facility.

Along with the findings reported in this study, additional research is needed to further investigate the potential relationship and effect these variables and other variables have on job satisfaction.

It is hoped that the barrier to the faculty member's job satisfaction are found in this research can contribute to a great extent to improve the level of faculty members as well as academic education level in Universities Institutes/Colleges.

10. The Implications of the Study

It is the hope of the researchers that the findings would contribute towards developing ways to improve job satisfaction among

faculty members. This would definitely benefit the education industry and the nation in the long run.

11. Suggestions

Following suggestions need to be adopted by the education ministry as well as the administrators of various universities/institutions/colleges so as to increase the motivation level of faculty members:

- Leadership behavior of the head of the departments/dean/the immediate authority should be good as it is having influence on the job satisfaction among the faculty members.
- Rewards need to be designed properly for the faculty members as rewards have a remarkable impact on the job satisfaction. In education sector, on the occasion of teachers day faculty members may be given appreciation certificates, awards, and increments in salary, gifts on the occasion of festivals.
- Career prospects are also required for the upliftment of both, the organization and the faculty member. They should be supported to attend seminars, conferences and faculty development programmes. Attributes of the job should comply with the demands of the faculty member and the faculty member is pleased with his job.
- Paid vacation will work like anything for the faculty member as they are not there in the private colleges/institutions.

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Emergence of Search Engine Optimization as an Advertising Tool

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Abstract

SEO considers how search engines work, what people search for, the actual search terms typed into search engines and which search engines are preferred by their targeted audience. Optimizing a website may involve editing its content and HTML and associated coding to increase its relevance to specific keywords and to remove barriers to the indexing activities of search engines. Promoting a site to increase the number of back links, or inbound links, is another SEO tactic. The initialism 'SEO' can refer to 'Search Engine Optimizers,' a term adopted by an industry of consultants who carry out optimization projects on behalf of clients, and by employees who perform SEO services in–house. Search engine optimizers may offer SEO as a stand–alone service or as a part of a broader marketing campaign. This paper evaluates the impact of SEO on the advertisement of firm. The sample size for the research is 100 managers from different IT companies of North India. The paper uses analytical tools including Correlation, Regression, Anova and Chi Square.

Keywords: SEO, Marketing, Advertisement, Chi Square.

1. Introduction

Search Engine Optimization (SEO) is the process of improving the visibility of a website or a web page in search engines via the natural or unpaid ('organic' or 'algorithmic') search results. Other forms of Search Engine Marketing (SEM) target paid listings. In general, the earlier (or higher on the page), and more frequently a site appears in the search results list, the more visitors it usually receives from the search engine's users. SEO may target different kinds of search, including the image search, local search, video search and industry–specific vertical search engines. This gives a website web presence.

As an Internet marketing strategy, SEO reckons the working of the search engine; consider what people are searching, the definite search terms typed into search engines and which search engines are favored by their beleaguered addressees. Optimizing a website may engross bowdlerization of its matter and HTML and coupled coding for amplifying its significance to precise keywords and to get rid of barriers to the indexing actions of search engines. Endorsing a site to enhance the quantity of associated links, or inbound links, is an additional SEO method.

SEO is an idiom espoused by an industry of consultants who perform the work of project and service optimizations for their client base, supported by the in–house employees who execute SEO. The service of SEO tenders as an impartial service or as a component of a larger marketing campaign. Since effective SEO may require changes to the HTML source code of a site and site content, SEO tactics may be incorporated into website development and design. The term "Search Engine Friendly" may be used to describe website designs, menus, content management systems, images, videos, shopping carts, and other elements that have been optimized for the purpose of search engine exposure.

Another class of techniques, known as Black Hat SEO, uses methods such as link farms, keyword stuffing and article spinning that degrade both the relevance of search results and the quality of user–experience with search engines. Search engines look for sites that employ these techniques in order to remove them from their indices.

Webmasters and content providers began optimizing sites for search engines in the mid–1990s, as the first search engines were cataloging the early web. Initially, all webmasters needed to submit the address of a page, or URL, to the various engines which would send a 'Spider' to 'Crawl' that page, extract links to other pages from it, and return information found on the page to be indexed. The process involves a search engine spider downloading a page and storing it on the search engine's own server,

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where a second program, known as an indexer, extracts various information about the page, such as the words it contains and the location of those words, as well as any weight for specific words, and all links the page contains, which are then placed into a scheduler for crawling at a later date.

Some search engines have also reached out to the SEO industry, and are recurrent sponsors and visitors at SEO conferences, chats, and seminars. With the beginning of paid insertion, nowadays few search engines indulge in the vested interest of the strength of the optimization community. Foremost search engines endow with information and guidelines to help with site optimization. Google has sitemaps program to help webmasters learn, if Google is having any troubles indexing their website and also offers data on Google traffic to the website. Google Guidelines are a list of recommended practices, Google has presented as guidance to webmasters. Yahoo! Site Explorer provides a way for webmasters to submit URLs, establish how many pages are in the Yahoo! index and view link information. Bing Toolbox provides a way for webmasters to submit a sitemap and web feeds, allowing users to determine the crawl rate, and how many pages have been indexed by their search engine.

SEO may not be the suitable strategy for every website. There may be other Internet Marketing Strategy that may be better and efficient, depending upon the goal of the website owner. The ATO (Ad Text Optimization) may be a technique, which is paid search promotion. A triumphant Internet promotion campaign may force organic traffic, accomplished with the help of optimization techniques and unpaid promotion, to web pages, but it could employ the paid advertising on web–pages and search engine. Other techniques such as construction of top quality web pages to connect and influence, attending technical issues which might keep search engines from swarming and indexing those sites, setting up analytics programs to facilitate site possessors to gauge their triumphs, and improving a site's conversion rate.

The SEO may produce a return on investment. Search engines do not get paid for organic search traffic, their algorithms modification, and further there are no assurances of sustained referrals. (A few trading sites i.e., eBay may be a particular case for this; it will proclaim how and when the standing algorithm will alter a few months ahead of altering the algorithm). Because of uncertainty and non–guarantee, the business which depends solely on the search engine traffic may face major loss if the operations of the search engine discontinue sending guests.

2. Objectives of the Study

- To know the effect of Search Engine Optimization (SEO) on the advertisement.
- To find out the customer's perception about SEO as an advertisement tool.
- To compare SEO with other advertisement tools.

3. Review of Literature

A number of researchers studied about the SEO. The research about Search Engine Optimization has grown only in recent times. Vascellaro[1], Bharat[2], Elliot[3], McAfee and Lazzara[4], Thomases and Ghanadan[5], Rognerud[6], Eren[7], Comscore World Metrix[8], Sezgin[9] focussed on search engine optimization in their studies.

Vascellaro[1] reveals that Search Engine Marketing is the fastest growing advertising medium in the world, projected to become 10 times more powerful and influential than traditional media outlets such as: network television, cable television, local television, network radio, local radio, satellite radio, national newspapers, local newspapers, magazines, billboards, direct mail, telemarketing and more. Bharat[2] analyzed experienced users who questioned about the search engines' complex behavior. They explore many topics in parallel, experiment with query variations, consult multiple search engines, and gather information over many sessions. In the process they need to keep track of search context-namely useful queries and promising result links, which can be hard. Elliot[3] found that relationship between advertising expenditure and sales are stable. McAfee and Lazzara[4] exposed that there are certain things to watch out for when selecting a firm to help you with your search engine optimization project Google offers page of tips to Webmasters regarding use of SEO firms. Thomases and Ghanadan[5] exposed that it's hard to think of reasons why life science companies wouldn't embark on Search Engine Optimization activities as part of their overall marketing strategies. Eren[7] reveals that as a result of increasing popularity of the Internet, a crowd, which is also named as 'Electronic Community' was introduced. Marketers, who try to reach customers in a fast and effective way with direct marketing method and also reduce customer reaching–costs, aim to reach electronic communities that have big potentials. Comscore World Metrix[8] evaluate that Turkey has 7th biggest Internet population in Europe and furthermore, it also has users who spend most time on the Internet in Europe, and it is easy to introduce power of a web site in a country like Turkey. Sezgin1 unearthed the fact that it must be suitable to some technical conditions. A typical search engine optimization has a process that can be performed to move up a web site.

According to the research studies, number of web sites on the Internet is above 156 million. According to a study conducted in July 2009, 81 percent of Internet users enter to the Internet Environment via search engine web pages. For instance, 80 per-

cent of people, who want to buy car, search for a car by using search engines. A research study in February 2009 revealed that Google is the most widely used search engine. Fathom Online report states that, keyword cost has rised to 19% in one year since September 2004. It has been realized that organic results are more appealing to searchers because they are considered more objective and unbiased than sponsored results. An online survey conducted by Georgia Tech University reports that, over 70% of the search engine users prefer clicking organic results to sponsored results.

Researchers have studied the effect of advertisement on sales through the SEO and on other components regarding to this. However, not much research has been undertaken on the impact of SEO on advertisement and sales as well as in the case of Indian companies. The present study will investigate the aforesaid relationship and effect with respect to the companies listed at Indian bourses. Though the researchers study about the advertisement and SEO, it is not in relation with each other but as a separate topic. The present research will explore the above said topic.

4. Research Methodology

The sampling techniques used in this study: Probability and Non Probability, is a hybrid technique which includes both. In Probability, we select the respondents by chance, whereas in Non Probability we select by choice.

The following tools are used for Analysis of data:

The **Mean** is a particular informative measure of the 'Central Tendency' of the variable, if it is reported along with its confidence intervals.

$$\text{Mean} = (Sx_i)/n$$

Usually we are interested in statistics (such as the mean) from our sample only to the extent to which they can infer information about the population. The confidence intervals for the mean give us a range of values around the mean where we expect the "true" (population) mean is located (with a given level of certainty).

The **Standard Deviation** is a commonly used measure of variation and for a population of values it is computed as:

$$s = [S(x_i - m)^2/N]^{1/2}$$

where, m is the population mean and N is the population size.

The sample estimate of the population *standard deviation* is computed as:

$$s = [S(x_i - x\text{–}bar)^2/(n-1)]^{1/2}$$

where, x–bar is the sample mean and n is the sample size.

The *variance* of a population of values is computed as:

$$s^2 = S(x_i - m)^2/N$$

where, M is the population mean and N is the population size.

The unbiased sample estimate of the population variance is computed as:

$$s^2 = S(x_i - xbar)^2/n-1$$

where, x bar is the sample mean and n is the sample size.

Skewness measures the deviation of the distribution from symmetry. If the skewness is clearly different from 0, then that distribution is asymmetrical, while normal distributions are perfectly symmetrical.

$$\text{Skewness} = n*M_3/[(n-1)*(n-2)*s^3]$$

where:

- M^3 is equal to: $S(x_i\text{-Mean}_x)^3$
- s^3 is the standard deviation (sigma) raised to the third power
- N is the valid number of cases.

Kurtosis measures the 'Peak' of a distribution. If the kurtosis is clearly different than 0, then the distribution is either flatter or more peaked than normal; the *kurtosis* of the normal distribution is 0. *Kurtosis* is computed as:

$$\text{Kurtosis} = [n*(n+1)*M_4 - 3*M_2*M_2*(n-1)]/[(n-1)*(n-2)*(n-3)*s^4]$$

Where,

- M_j is equal to: $S(x_i\text{-Mean}_x)^j$
- N is the valid number of cases
- s^4 is the standard deviation (sigma) raised to the fourth power

The general purpose of multiple regressions is to learn more about the relationship between several independent or predictor variables and a dependent or criterion variable.

A line in a two–dimensional or two–variable space is defined by the equation $Y = a + b * X$; in full text, the *Y* variable can be expressed in terms of a constant (*a*) and a slope (*b*) times the *X* variable. The constant is also referred to as the intercept, and the slope as the regression coefficient or *B* coefficient. Multiple regression procedures will estimate a linear equation of the form:

$$Y = a + b_1*X_1 + b_2*X_2 + ... + b_p*X_p$$

The regression line expresses the best prediction of the dependent variable (*Y*), given the independent variables (*X*). However, nature is rarely (if ever) perfectly predictable, and usually

there is substantial variation of the observed points around the fitted regression line. The deviation of a particular point from the regression line (its predicted value) is called the Residual Value.

The **Standardized Residual Value** is given as the Observed minus Predicted divided by the Square Root of the Residual Mean Square.

The **Mahalanobis Distance** is the distance of a case from the centroid in the multidimensional space, defined by the correlated independent variables (if the independent variables are uncorrelated, it is the same as the simple Euclidean Distance). Thus, this measure provides an indication of whether or not an observation is an outlier with respect to the independent variable values.

The **Deleted Residual** is the residual value for the respective case, had it not been included in the regression analysis, that is, if one would exclude this case from all computations. If the *deleted residual* differs greatly from the respective standardized residual value, then this case is possibly an outlier because its exclusion changed the regression equation.

Cook's Distance is another measure of impact of the respective case on the regression equation. It indicates the difference between the computed B values and the values one would have obtained, had the respective case been excluded. All distances should be of about equal magnitude; if not, then there is reason to believe that the respective case(s) biased the estimation of the regression coefficients.

Further, **Chi Square Test** is used to check the feasibility of the variables. Chi–square is a statistical test commonly used to compare observed data with data we would expect to obtain according to a specific hypothesis. For example, if, according to Mendel's laws, you expected 10 out of 20 offsprings, from a cross to be male and the actual observed number was 8 males, then you might want to know about the "goodness to fit" between the observed and expected. Were the deviations (differences between observed and expected) the result of chance, or were they due to other factors? How much deviation can occur before you, the investigator, must conclude that something other than chance is at work, causing the observed to differ from the expected. The chi–square test is always testing what scientists call the **Null Hypothesis,** which states that there is no significant difference between the expected and observed result.

5. Findings and Analysis

5.1 Descriptive Statistics

In Tables 1 to 4 we calculated the mean, medium, mode, std. deviation, variance, skewness and kurtosis for the variable effect and the values were found to be 4.03, 4.00, 4, 0.797, 0.635, −1.275 and 3.237 respectively and for sales the values were 3.74, 4.00, 4, 0.928, 0.861, −1.003 and 1.078 respectively. The values for others like online, attract, time and beneficial can be obtained from the descriptive state tables.

Correlation: After descriptive state I, correlation test was used on the sample responses. The table for the correlation is as follows:

Table 5 shows the relation of one question–keyword with other factors, that is the relationship of one question–keyword with all other keywords. For example, in the table, the relation value of the effect and sale is 0.32, effect with online is 0.34, with attract is 0.11, with time is 0.05 and with beneficial is −0.00 respectively. The other correlation values of the effect with other keywords can be seen in the table.

Regression: In Regression, we calculate the Model Summary, Anova, and Coefficients which is as follows

In Table 6 the dependant variable is sale. The R square is 0.464 and the value of R is 0.681. The value of Std. Error of Estimate is 0.756.

In ANOVA Table 7, the value of sum of squares for Regression is 39.515, residual is 45.725 and total is 85.240. The value of df for regression is 19, for residual is 80 and the total is 99, and the other values of Mean Square, F, Sig. is as shown in Table 7.

In Table 8, Coefficient of the values of B, Std. Error, Beta, t, Significance under the un–standardized coefficients and standardized coefficients are computed. The value of the standard error under the un–standardized coefficient is 0.117 for effect, 0.134 for online and other values are given in table. The values of beta are for effect 0.268, for online −0.113 and for attract 0.125 respectively. Remaining values are presented in the table.

5.2 Residual Table

In Table 9, the observed value for 1st respondent is 4.000; predicted value is 2.986001 and residual is 1.01400. For this, Std. Error is 0.286110 and the Mahalanobis Distance is 13.18883. For the 2nd respondent, the values for Residual and Mahalanobis Distance is 0.22077 and 25.28979 respectively. The other values for the predicted, observed, residual and Mahalanobis Distance are given in the table.

5.3 Chi–Square Test

The Chi–Square is significant at. 050 and shows a positive significance.

In Tables 10 to 12, the Chi Square value and asymptotic significant value is shown. When the asymptotic significant value is less than 0.05 (<0.05), there is low variance, which means sample is a good sample and can be generalized for the whole universe. If the value of asymptotic significant is more than 0.05 (>0.05),

Table 1. Descriptive Statistics 1

Statistics						
	Effect	Sale	Online	Attract	Time	Beneficial
Mean	4.03	3.74	3.94	3.66	3.86	4.09
Median	4.00	4.00	4.00	4.00	4.00	4.00
Mode	4	4	4	4	4	4
Std. Deviation	.797	.928	.722	.901	.876	.922
Variance	.635	.861	.522	.813	.768	.850
Skewness	−1.275	−1.003	−.730	−.535	−.364	−1.049
Std. Error of Skewness	.241	.241	.241	.241	.241	.241
Kurtosis	3.237	1.078	1.975	.340	−.115	.849
Std. Error of Kurtosis	.478	.478	.478	.478	.478	.478

Table 2. Descriptive Statistics 2

Statistics						
	1st Out	Required	1st Result	Use	Satisfied	Never Go
Mean	3.62	3.31	3.41	3.37	3.26	2.83
Median	4.00	3.00	4.00	4.00	3.00	3.00
Mode	4	3	4	4	3	2
Std. Deviation	.951	.992	1.102	1.098	1.021	1.092
Variance	.905	.984	1.214	1.205	1.043	1.193
Skewness	−.388	−.027	−.506	−.409	.036	−.034
Std. Error of Skewness	.241	.241	.241	.241	.241	.241
Kurtosis	−.430	−.641	−.292	−.501	−.569	−.910
Std. Error of Kurtosis	.478	.478	.478	.478	.478	.478

Table 3. Descriptive Statistics 3

Statistics						
	My Work	Adverse	Universal	Tool	Batter	Companies
Mean	3.93	3.17	3.55	3.89	3.06	3.41
Median	4.00	3.00	3.00	4.00	3.00	4.00
Mode	4	3	3	4	4	4
Std. Deviation	.756	1.055	.925	.815	1.081	1.065
Variance	.571	1.112	.856	.665	1.168	1.133
Skewness	−1.030	−.243	−.149	−.593	−.219	−.580
Std. Error of Skewness	.241	.241	.241	.241	.241	.241
Kurtosis	2.285	−.450	−.087	.127	−.828	−.249
Std. Error of Kurtosis	.478	.478	.478	.478	.478	.478

Table 4. Descriptive Statistics 4

Statistics		
	Costly	Every SE
Mean	3.59	3.69
Median	4.00	4.00
Mode	4	4
Std. Deviation	1.016	.907
Variance	1.032	.822
Skewness	−.279	−.668
Std. Error of Skewness	.241	.241
Kurtosis	−.530	.451
Std. Error of Kurtosis	.478	.478

Table 5. Coefficient(s) of Correlation

	Correlations																			
	Effect	Sale	Online	Attract	Time	Beneficial	1st Out	Required	1st Result	Use	Satisfied	Never Go	My Work	Adverse	Universal	Tool	Batter	Companies	Costly	Every SE
Effect	1.00	0.32	0.34	0.11	0.05	−0.00	0.02	0.08	−0.04	0.25	0.06	−0.12	−0.03	0.22	0.00	0.04	0.16	0.16	−0.10	0.14
sale	0.32	1.00	0.25	0.27	0.23	0.24	0.37	0.15	−0.10	0.29	0.10	−0.21	0.18	−0.02	0.13	0.15	0.21	0.26	0.03	0.07
online	0.34	0.25	1.00	0.36	0.29	0.22	0.20	0.11	0.02	0.28	0.01	−0.09	0.16	0.04	0.23	0.21	0.22	0.10	−0.02	0.11
attract	0.11	0.27	0.36	1.00	0.46	0.21	0.10	0.21	0.18	0.20	0.25	−0.01	0.28	−0.08	0.23	0.21	0.04	0.25	0.03	0.08
time	0.05	0.23	0.29	0.46	1.00	0.19	0.26	0.36	0.33	0.24	0.32	−0.17	0.14	0.07	0.20	0.19	0.24	0.25	−0.04	0.06
beneficial	−0.00	0.24	0.22	0.21	0.19	1.00	0.20	0.27	−0.11	−0.02	−0.11	−0.21	0.04	−0.08	−0.02	0.28	−0.06	0.04	0.03	−0.03
1st out	0.02	0.37	0.20	0.10	0.26	0.20	1.00	0.38	0.24	0.13	0.12	−0.27	0.08	0.05	0.02	0.19	0.17	0.31	0.03	0.17
required	0.08	0.15	0.11	0.21	0.36	0.27	0.38	1.00	0.46	0.25	0.46	−0.23	0.22	0.08	0.12	0.29	0.04	0.28	0.12	0.29
1st result	−0.04	−0.10	0.02	0.18	0.33	−0.11	0.24	0.46	1.00	0.23	0.44	−0.03	0.16	0.17	0.16	0.06	0.20	0.34	0.03	0.10
use	0.25	0.29	0.28	0.20	0.24	−0.02	0.13	0.25	0.23	1.00	0.45	−0.14	0.10	0.06	0.34	0.12	0.36	0.08	−0.31	0.03
satisfied	0.06	0.10	0.01	0.25	0.32	−0.11	0.12	0.46	0.44	0.45	1.00	−0.11	0.29	0.08	0.24	0.16	0.21	0.11	−0.20	−0.03
never go	−0.12	−0.21	−0.09	−0.01	−0.17	−0.21	−0.27	−0.23	−0.03	−0.14	−0.11	1.00	−0.00	0.13	0.07	−0.08	0.15	0.06	0.04	0.09
my work	−0.03	0.18	0.16	0.28	0.14	0.04	0.08	0.22	0.16	0.10	0.29	−0.00	1.00	0.03	0.21	0.20	0.08	0.15	−0.04	0.23
adverse	0.22	−0.02	0.04	−0.08	0.07	−0.08	0.05	0.08	0.17	0.06	0.08	0.13	0.03	1.00	−0.08	−0.00	−0.00	−0.01	0.22	0.41
universal	0.00	0.13	0.23	0.23	0.20	−0.02	0.02	0.12	0.16	0.34	0.24	0.07	0.21	−0.08	1.00	0.27	0.19	0.16	−0.20	0.06
tool	0.04	0.15	0.21	0.21	0.19	0.28	0.19	0.29	0.06	0.12	0.16	−0.08	0.20	−0.00	0.27	1.00	0.27	0.29	0.13	0.28
batter	0.16	0.21	0.22	0.04	0.24	−0.06	0.17	0.04	0.20	0.36	0.21	0.15	0.08	−0.00	0.19	0.27	1.00	0.35	−0.17	0.11
companies	0.16	0.26	0.10	0.25	0.25	0.04	0.31	0.28	0.34	0.08	0.11	0.06	0.15	−0.01	0.16	0.29	0.35	1.00	0.18	0.35
costly	−0.10	0.03	−0.02	0.03	−0.04	0.03	0.03	0.12	0.03	−0.31	−0.20	0.04	−0.04	0.22	−0.20	0.13	−0.17	0.18	1.00	0.42
every SE	0.14	0.07	0.11	0.08	0.06	−0.03	0.17	0.29	0.10	0.03	−0.03	0.09	0.23	0.41	0.06	0.28	0.11	0.35	0.42	1.00

Table 6. Regression (Model Summary)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.681[a]	.464	.336	.756

a. Predictors: (Constant), every SE, use, beneficial, my work, never go, 1st result, Effect, universal, 1st out, attract, batter, adverse, tool, online, costly, time, companies, satisfied, required
b. Dependent Variable: sale

Table 7. Regresion (Sum of Squares)

ANOVA[b]						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	39.515	19	2.080	3.639	.000[a]
	Residual	45.725	80	.572		
	Total	85.240	99			

a. Predictors: (Constant), every SE, use, beneficial, my work, never go, 1st result, Effect, universal, 1st out, attract, batter, adverse, tool, online, costly, time, companies, satisfied, required
b. Dependent Variable: sale

Table 8. Regression Coefficients

Coefficients						
		Unstandardized Coefficients		**Standardized Coefficients**		
	Model	**B**	**Std. Error**	**Beta**	**T**	**Sig**
1	(Constant)	−.413	.950		−.434	.665
	Effect	.312	.117	.268	2.677	.009
	online	−.146	.134	−.113	−1.088	.280
	attract	.129	.111	.125	1.161	.249
	time	.062	.113	.059	.549	.584
	beneficial	.139	.101	.138	1.372	.174
	1st out	.323	.096	.331	3.364	.001
	required	−.032	.117	−.034	−.272	.786
	1st result	−.286	.092	−.340	−3.100	.003
	use	.197	.092	.233	2.138	.036
	satisfied	.002	.109	.002	.014	.989
	never go	−.072	.082	−.085	−.879	.382
	my work	.216	.115	.176	1.875	.064
	adverse	.001	.092	.001	.014	.989
	universal	.096	.097	.095	.983	.329
	tool	−.118	.114	−.104	−1.030	.306
	batter	.101	.092	.117	1.089	.280
	companies	.131	.095	.150	1.372	.174
	costly	.198	.095	.217	2.085	.040
	every SE	−.152	.120	−.149	−1.265	.209

which means the data varies to a great extent and the result cannot be generalized to the whole universe.

In the table, the asymptotic value of all the variables is less than 0.050 which is significant. All the asymptotic values less than 0.05 can be generalize to the whole universe.

6. Conclusion

Search Engine Optimization affects the Advertisement and Sales to a great length. In the present era most people use search engines like Google, MSN, Altavista etc., for searching the product or services and more than 90% people select the product from first page only and in that 90% more than 80% select the product or services from first three or four. The companies who are using the SEO for the purpose of advertisement are getting new customers than the companies using the other methods. After the application of Statistical Tools like Regression, Correlation and Chi Square, its shows that the objectives of the research is very much true and there is a visible effect of the SEO on the advertisement of companies and companies using SEO for the advertising are generating more revenue than the other companies.

Table 9. Predicted & Residual Values

Predicted & Residual Values (Dependent variable: sale)									
	Observed-Value	Predicted-Value	Residual	Standard-Pred. v.	Standard-Residual	Std. Err.-Pred.Val	Mahalanobis-Distance	Deleted-Residual	Cook's-Distance
1	4.000000	2.986001	1.01400	−1.19345	1.34124	0.286110	13.18883	1.18350	0.017549
2	4.000000	3.779233	0.22077	0.06210	0.29201	0.389514	25.28979	0.30055	0.002098
3	4.000000	3.825453	0.17455	0.13526	0.23088	0.387950	25.07918	0.23694	0.001293
4	4.000000	3.891959	0.10804	0.24053	0.14291	0.233641	8.46523	0.11945	0.000119
5	4.000000	3.954861	0.04514	0.34009	0.05971	0.324098	17.20401	0.05530	0.000049
6	4.000000	4.313696	−0.31370	0.90806	−0.41493	0.281599	12.74527	−0.36423	0.001610
7	4.000000	3.611043	0.38896	−0.20412	0.51448	0.330385	17.91676	0.48077	0.003862
8	4.000000	4.102071	−0.10207	0.57310	−0.13501	0.317375	16.45698	−0.12391	0.000237
9	4.000000	3.692870	0.30713	−0.07460	0.40625	0.323155	17.09832	0.37579	0.002257
10	4.000000	4.095999	−0.09600	0.56349	−0.12698	0.277556	12.35370	−0.11095	0.000145
11	4.000000	4.216836	−0.21684	0.75475	−0.28681	0.344140	19.52377	−0.27351	0.001356
12	4.000000	3.856295	0.14370	0.18408	0.19008	0.242253	9.17517	0.16015	0.000230
13	4.000000	3.736944	0.26306	−0.00484	0.34795	0.292505	13.82982	0.30937	0.001253
14	4.000000	3.782186	0.21781	0.06677	0.28811	0.289712	13.54812	0.25531	0.000837
15	5.000000	3.883566	1.11643	0.22724	1.47674	0.318032	16.52929	1.35648	0.028485
16	1.000000	2.835797	−1.83580	−1.43120	−2.42826	0.396818	26.28461	−2.53389	0.154742
17	3.000000	3.327909	−0.32791	−0.65227	−0.43373	0.269164	11.55897	−0.37551	0.001564
18	3.000000	3.401255	−0.40125	−0.53618	−0.53075	0.295608	14.14592	−0.47367	0.003001
19	3.000000	3.327909	−0.32791	−0.65227	−0.43373	0.269164	11.55897	−0.37551	0.001564
20	3.000000	3.211455	−0.21146	−0.83660	−0.27970	0.255521	10.31916	−0.23873	0.000570
21	4.000000	3.827423	0.17258	0.13838	0.22827	0.463242	36.17996	0.27632	0.002508
22	4.000000	3.570558	0.42944	−0.26820	0.56803	0.497067	41.80634	0.75644	0.021639
23	2.000000	3.143266	−1.14327	−0.94453	−1.51223	0.365745	22.18040	−1.49260	0.045614
24	4.000000	3.601052	0.39895	−0.21993	0.52770	0.364177	21.98205	0.51949	0.005478
25	4.000000	3.332361	0.66764	−0.64522	0.88310	0.321092	16.86814	0.81458	0.010471
26	5.000000	3.203320	1.79668	−0.84947	2.37652	0.452135	34.41885	2.79711	0.244797
27	4.000000	4.579547	−0.57955	1.32886	−0.76658	0.356400	21.01144	−0.74515	0.010795
28	4.000000	4.081192	−0.08119	0.54005	−0.10739	0.302256	14.83430	−0.09664	0.000131
29	5.000000	4.465205	0.53479	1.14788	0.70739	0.299859	14.58438	0.63463	0.005543
30	4.000000	3.723709	0.27629	−0.02579	0.36546	0.447304	33.66617	0.42510	0.005534
31	4.000000	3.228368	0.77163	−0.80983	1.02066	0.289686	13.54552	0.90442	0.010506
32	3.000000	3.824595	−0.82460	0.13390	−1.09072	0.227836	8.00123	−0.90697	0.006535
33	4.000000	3.275834	0.72417	−0.73470	0.95787	0.286080	13.18591	0.84519	0.008948
34	4.000000	2.873678	1.12632	−1.37124	1.48982	0.420189	29.59202	1.62978	0.071779
35	4.000000	4.120355	−0.12036	0.60204	−0.15920	0.230459	8.20951	−0.13268	0.000143
36	4.000000	3.524395	0.47561	−0.34127	0.62910	0.284378	13.01772	0.55399	0.003799
37	4.000000	3.540382	0.45962	−0.31596	0.60795	0.219718	7.37196	0.50202	0.001862
38	4.000000	4.164238	−0.16424	0.67150	−0.21724	0.229098	8.10116	−0.18085	0.000263
39	4.000000	3.601580	0.39842	−0.21910	0.52700	0.251951	10.00535	0.44820	0.001952

(*Continued*)

Table 9 (*Continued*)

Predicted & Residual Values (Dependent variable: sale)									
	Observed-Value	Predicted-Value	Residual	Standard-Pred. v.	Standard-Residual	Std. Err.-Pred.Val	Mahalanobis-Distance	Deleted-Residual	Cook's-Distance
40	4.000000	3.573061	0.42694	−0.26424	0.56472	0.277619	12.35977	0.49348	0.002873
41	4.000000	3.687076	0.31292	−0.08377	0.41391	0.249012	9.75026	0.35100	0.001169
42	4.000000	4.208575	−0.20858	0.74167	−0.27589	0.292635	13.84298	−0.24533	0.000789
43	3.000000	2.728685	0.27131	−1.60074	0.35888	0.278372	12.43227	0.31387	0.001168
44	3.000000	3.103707	−0.10371	−1.00714	−0.13718	0.356764	21.05641	−0.13342	0.000347
45	2.000000	2.757664	−0.75766	−1.55487	−1.00218	0.357558	21.15462	−0.97597	0.018639
46	3.000000	3.701080	−0.70108	−0.06160	−0.92734	0.299813	14.57960	−0.83191	0.009522
47	3.000000	3.549026	−0.54903	−0.30228	−0.72621	0.307927	15.43373	−0.65822	0.006288
48	3.000000	2.220750	0.77925	−2.40471	1.03074	0.420389	29.62115	1.12805	0.034420
49	2.000000	3.044649	−1.04465	−1.10062	−1.38179	0.266332	11.29630	−1.19266	0.015443
50	4.000000	3.127643	0.87236	−0.96926	1.15389	0.299329	14.52935	1.03453	0.014677
51	4.000000	3.623806	0.37619	−0.18391	0.49760	0.247868	9.65182	0.42150	0.001671
52	5.000000	4.274914	0.72509	0.84668	0.95909	0.276559	12.25800	0.83711	0.008203
53	4.000000	3.156606	0.84339	−0.92341	1.11558	0.342118	19.28347	1.06058	0.020151
54	4.000000	3.910798	0.08920	0.27034	0.11799	0.281018	12.68871	0.10350	0.000129
55	5.000000	4.151167	0.84883	0.65081	1.12277	0.321977	16.96664	1.03691	0.017060
56	4.000000	3.984692	0.01531	0.38731	0.02025	0.224425	7.73406	0.01679	0.000002
57	5.000000	4.612339	0.38766	1.38076	0.51277	0.375838	23.47678	0.51492	0.005732
58	4.000000	4.354314	−0.35431	0.97235	−0.46866	0.262500	10.94530	−0.40289	0.001712
59	5.000000	4.225537	0.77446	0.76852	1.02440	0.343111	19.40131	0.97536	0.017142
60	5.000000	4.781701	0.21830	1.64883	0.28875	0.378256	23.79261	0.29119	0.001857
61	4.000000	3.200598	0.79940	−0.85378	1.05739	0.537144	48.98554	1.61431	0.115082
62	4.000000	4.720212	−0.72021	1.55151	−0.95264	0.281797	12.76465	−0.83642	0.008503
63	5.000000	3.305665	1.69433	−0.68748	2.24114	0.252087	10.01723	1.90628	0.035345
64	4.000000	5.098418	−1.09842	2.15014	−1.45291	0.383509	24.48577	−1.47902	0.049243
65	4.000000	4.198076	−0.19808	0.72506	−0.26200	0.311751	15.84419	−0.23866	0.000847
66	5.000000	4.723824	0.27618	1.55723	0.36531	0.290888	13.66646	0.32417	0.001361
67	4.000000	4.289639	−0.28964	0.86999	−0.38311	0.303395	14.95381	−0.34524	0.001679
68	4.000000	4.201547	−0.20155	0.73055	−0.26659	0.436536	32.01770	−0.30236	0.002666
69	4.000000	4.289639	−0.28964	0.86999	−0.38311	0.303395	14.95381	−0.34524	0.001679
70	5.000000	4.692039	0.30796	1.50692	0.40735	0.347425	19.91726	0.39041	0.002816
71	5.000000	4.870285	0.12972	1.78905	0.17158	0.254422	10.22205	0.14628	0.000212
72	5.000000	4.682561	0.31744	1.49191	0.41988	0.211496	6.75783	0.34439	0.000812
73	4.000000	3.965199	0.03480	0.35645	0.04603	0.364213	21.98661	0.04532	0.000042
74	5.000000	5.028406	−0.02841	2.03933	−0.03757	0.333161	18.23583	−0.03525	0.000021
75	3.000000	4.107606	−1.10761	0.58186	−1.46506	0.377128	23.64501	−1.47453	0.047330
76	3.000000	3.156173	−0.15617	−0.92410	−0.20657	0.323089	17.09089	−0.19107	0.000583
77	3.000000	3.372952	−0.37295	−0.58097	−0.49331	0.407730	27.80527	−0.52592	0.007038
78	4.000000	3.778678	0.22132	0.06122	0.29275	0.262690	10.96260	0.25171	0.000669
79	2.000000	3.153658	−1.15366	−0.92808	−1.52598	0.289380	13.51488	−1.35170	0.023418
80	3.000000	2.423643	0.57636	−2.08357	0.76236	0.308487	15.49349	0.69149	0.006965
81	4.000000	4.409656	−0.40966	1.05995	−0.54186	0.433741	31.59640	−0.61066	0.010738
82	4.000000	4.852406	−0.85241	1.76075	−1.12750	0.326003	17.41851	−1.04711	0.017835
83	5.000000	4.329935	0.67006	0.93377	0.88631	0.297912	14.38271	0.79324	0.008547
84	4.000000	3.080402	0.91960	−1.04403	1.21638	0.242149	9.16640	1.02472	0.009424
85	3.000000	3.575515	−0.57551	−0.26035	−0.76125	0.345111	19.63977	−0.72701	0.009635
86	4.000000	3.964926	0.03507	0.35602	0.04639	0.296546	14.24209	0.04145	0.000023
87	4.000000	3.873413	0.12659	0.21117	0.16744	0.369519	22.66097	0.16632	0.000578
88	3.000000	4.094246	−1.09425	0.56071	−1.44739	0.359292	21.36996	−1.41349	0.039476
89	3.000000	3.294107	−0.29411	−0.70577	−0.38902	0.411554	28.34792	−0.41797	0.004529
90	4.000000	4.186670	−0.18667	0.70700	−0.24691	0.441510	32.77427	−0.28329	0.002394
91	5.000000	4.559784	0.44022	1.29758	0.58229	0.371008	22.85199	0.57986	0.007084
92	2.000000	2.801473	−0.80147	−1.48553	−1.06013	0.461983	35.97811	−1.27911	0.053447
93	2.000000	3.022961	−1.02296	−1.13495	−1.35310	0.416507	29.05842	−1.46876	0.057279
94	1.000000	2.064183	−1.06418	−2.65253	−1.40762	0.467178	36.81430	−1.72159	0.099010

(*Continued*)

Table 9 (*Continued*)

Predicted & Residual Values (Dependent variable: sale)									
	Observed-Value	Predicted-Value	Residual	Standard-Pred. v.	Standard-Residual	Std.Err.-Pred.Val	Mahalanobis-Distance	Deleted-Residual	Cook's-Distance
95	4.000000	3.454870	0.54513	−0.45131	0.72106	0.344335	19.54701	0.68781	0.008585
96	4.000000	4.496264	−0.49626	1.19704	−0.65642	0.473703	37.87767	−0.81703	0.022927
97	2.000000	2.997938	−0.99794	−1.17456	−1.32000	0.366912	22.32851	−1.30542	0.035114
98	1.000000	2.674382	−1.67438	−1.68669	−2.21475	0.381341	24.19853	−2.24577	0.112256
99	4.000000	3.451933	0.54807	−0.45596	0.72494	0.404174	27.30520	0.76740	0.014724
100	2.000000	3.263929	−1.26393	−0.75354	−1.67183	0.402211	27.03100	−1.76290	0.076951
Minimum	1.000000	2.064183	−1.83580	−2.65253	−2.42826	0.211496	6.75783	−2.53389	0.000002
Maximum	5.000000	5.098418	1.79668	2.15014	2.37652	0.537144	48.98554	2.79711	0.244797
Mean	3.740000	3.740000	−0.00000	−0.00000	−0.00000	0.330848	18.81000	−0.00796	0.017570
Median	4.000000	3.757811	0.06717	0.02819	0.08885	0.319562	16.69871	0.07940	0.005004

Table 10. Chi-square test 1

Test Statistics							
	Effect	Sale	Online	Attract	Time	Beneficial	1st out
Chi-Square	112.900[a]	87.700[a]	112.200[a]	61.700[a]	58.400[a]	73.800[a]	49.200[a]
Df	4	4	4	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.0.

Table 11. Chi-square test 2

Test Statistics							
	Required	1st result	Use	Satisfied	Never go	My work	Adverse
Chi-Square	36.700[a]	31.400[a]	29.300[a]	34.900[a]	25.700[a]	125.300[a]	32.000[a]
df	4	4	4	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.0.

Table 12. Chi-square test 3

Test Statistics						
	Universal	Tool	Batter	Companies	Costly	Every SE
Chi-Square	56.500[a]	49.200[b]	31.300[a]	42.500[a]	35.100[a]	67.500[a]
df	4	3	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000	.000

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A Study of Emotional Intelligence of Secondary School Teachers in Relation to their Professional Development

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Abstract

Emotions are our responses to the world around us and they are created by the combination of thoughts, feelings and actions. If one uses his emotions effectively it helps him to lead a successful and better life. But if one can't control his/her emotions, it can result in disaster. It not only affects our relations with people but affects our self identity and ability to complete a task. One should be competent in handling one's emotions and hence Emotional Intelligence is a very important virtue. The purpose of the study was to investigate the Emotional Intelligence of secondary school teachers in relation to their Professional Development. 600 secondary school teachers (i.e. teachers teaching 9th & 10th standard) in government schools of Haryana state served as sample for the study. Results of the study indicated a significant positive relationship between emotional intelligence and professional development of secondary school teachers. Further it reveals that there is significant linear increase in professional development from low to moderate to high emotional intelligence groups.

Keywords: Emotional Intelligence, Professional Development, Teachers

1. Introduction

Student achievement, teacher effectiveness and school improvement are the critical components of our educational system and are interdependent. A school is a miniature of the society. Both teacher effectiveness and school improvement plans are often evaluated by measures of student achievement. It is clear from recent research that teachers have a great potential to affect student's educational outcomes[1]. A teacher makes a difference to an extent that he/she sparks a child's desire to learn. For this a teacher should have relevant skills, attitude, and personality in order to influence the students. A teacher should be a role model for the students. It is a teacher's duty to develop passion and enthusiasm to learn and to remove the gap between the teacher and a taught. Both the teacher and the taught must maintain a cordial relationship in order to develop an effective environment for leaning. Teachers are the architects of society. They act as a pivot for the transmission of intellect and help to keep the lamp of civilization burning. The basic duty of a teacher is to build the individuality of his or her students and to promote intellectual and moral development including meeting the demands of contemporary world. Teachers have an important influence on students' academic achievement and they also play a crucial role in educational attainment of their students. In today's classroom, the teachers get irritate on the small issues which results in an uncontrolled flow of emotions. The reason behind this is the heavy work load on teachers. Modern classrooms are full of responsibilities. The teachers not only have to prepare their lectures and related activities but also have other responsibilities like organizing co curricular activities, maintaining discipline & administrative tasks of the school. In addition to this their personal problems have also an impact on their profession. A teacher can do justice with his profession only when he is able to understand his emotions and emotions of his students.

Emotions and learning are interrelated. They act as two sides of a coin. In the school setting, there is competition between the teachers as well as students. As a result, the job of a teacher becomes hectic and requires the understanding of emotions and emotional intelligence in order to create better teaching and learning environment. Though, many teacher training institutions are developing very talented, skillful and knowledgeable teachers but the emotional aspect of the teaching-learning process is still lacking. Effective teaching requires mastery of content and teaching pedagogy on the part of a teacher. Both these

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requirements can be enriched with the inculcation of emotional intelligence skills. Emotionally intelligent teachers can effectively solve school and classroom problems. They can do better management of time and resources. Skill of emotional intelligence in teachers not only improves their quality of their teaching but also helps to deal the students with improved motivation and commitment. Hence emotional intelligence is an important characteristic of a teacher in present scenario.

Emotional intelligence is the ability to understand your own emotions and those of people around you. It is a balance between HEART (emotions) and MIND (intelligence). According to Mayer[2], Emotional intelligence is defined as "ability to monitor one's own and other's feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions". IQ accounts for only 20% of one's success, the rest 80% goes to emotional and social intelligence[3]. In modern time, the concept of Emotional intelligence was popularized by American Psychologist Dr. Daniel Goleman[4] in 1998 when he published his book "Working with Emotional Intelligence". He argued that human competencies such as self awareness, persistence and empathy are more important in life than a person's IQ. According to Goleman[4], "Emotional Intelligence is the capacity for recognizing our own feelings and those of others for motivating ourselves and managing emotions well in us and in our relationship". Goleman[4] has identified five 'social and emotional competencies' that constitute emotional intelligence which are following:

- Self Awareness-ability to know, recognize and discriminate ones own feelings
- Self Regulation-ability to manage ones feelings
- Motivation-ability to utilize feelings in order to achieve set goals
- Empathy-feeling and understanding the other person's emotions
- Social Skills-ability to handle feelings effectively while interacting with others

All the above competencies directly or indirectly affect the teachers and their teaching competency. Emotionally intelligent teachers who possess these competencies are able to create an effective teaching and learning experience for the students.

One way schools attempt to contribute to the improvement of theirs teachers is by providing professional development experiences for faculty. Professional development is an important strategy for building teacher quality. Professional development of teachers is one of the most relevant construct if we want to raise the standard of our education system in accordance with the changing needs of the society. Professional development refers to the development of a person in his or her professional role. More specifically, "Teacher development is the professional growth, a teacher achieves as a result of gaining increased experience and examining his or her teaching systematically"[5]. It includes formal experiences (such as attending workshops and professional meetings, mentoring etc.) and informal experiences. (Such as reading professional publications, watching T.V. documentaries related to an academic discipline etc.)[6]. Thus it is the sum of all activities formal and informal, carried out by the individual or system to promote staff growth and renewal. So, professional development is an instrument to improve the teachers and ultimately the student learning.

In the light of the above discussion the investigator decided to carry out research on emotional intelligence of secondary school teachers in relation to their professional development.

2. Objectives of the Study

- To study the relationship between emotional intelligence of secondary school teachers and their professional development.
- To study the differences in professional development of secondary school teachers at different levels of emotional intelligence.

3. Hypothesis of the Study

- There exists a significant relationship between emotional intelligence of secondary school teachers and their professional development.
- There exists significant difference in professional development of secondary school teachers at different levels of emotional intelligence.

4. Sample

In the present study, all the secondary school teachers (i.e. teachers teaching 9th & 10th standard) in government schools of Haryana state constituted the population.

A simple randomization technique of sampling was employed for collection of data. In the first phase of the study, the investigator randomly selected Ambala division from four divisions (i.e Gurgaon division, Ambala division, Hisar division and Rohtak division) of Haryana state. Out of Ambala division, all the districts namely Ambala, Kaithal, Kurukshetra, Panchkula and Yamuna Nagar were selected. In the second phase, the investigator selected 12 government secondary schools from each district on random basis. In the third phase, the investigator randomly selected 10 secondary school teachers from each school thus the selection of 60 schools resulted in the sample of 600 secondary school teachers. It was also taken

into consideration that only those teachers were selected in the sample that has minimum three years of teaching experience.

5. Tools Used

- Emotional Intelligence Scale (Anukool Hyde, Sanjyot Pethe & Upinder Dhar).
- Teacher's Professional Development Scale (Developed and standardized by the investigator).

6. Analysis and Interpretation of Data

Secondary School Teachers were classified into three groups High, Moderate and Low on the basis of their scores on Emotional Intelligence Scale. The teachers who have scored between 142 and 169 on Emotional Intelligence were included in High Emotional Intelligence Group. The teachers who have scored between 122 and 142 on Emotional Intelligence were included in Moderate Emotional Intelligence Group. The teachers who have scored between 65 and 122 on Emotional Intelligence Scale were included in Low Emotional Intelligence Group.

Hypotheses 1: There exists a significant relationship between emotional intelligence of secondary school teachers and their professional development.

Data showing the relationship between emotional intelligence and professional development of secondary school teachers is summarized in Table 1.

Table 1. Coefficient of correlation between emotional intelligence and professional development of secondary school teachers

S.No	Variables	Coefficient of Correlation
1	Emotional Intelligence (Total)	0.61*
2	Self Awareness	0.50*
3	Empathy	0.46*
4	Self Motivation	0.59*
5	Emotional Stability	0.51*
6	Managing Relations	0.48*
7	Integrity	0.48*
8	Self Development	0.60*
9	Value Orientation	0.62*
10	Commitment	0.61*
11	Altruistic Behaviour	0.59*

*Significant at 0.01 level

It can be observed from Table 1 that Emotional Intelligence of Secondary School Teachers was found to have significant positive correlation with Professional Development.

Further it can be seen from the table that all the ten dimensions of Emotional Intelligence were also found to have significant correlation with Professional Development. They are Self Awareness ($r = 0.50$, $p \leq 0.01$ level), Empathy ($r = 0.46$, $p \leq 0.01$ level), Self Motivation ($r = 0.59$, $p \leq 0.01$ level), Emotional Stability ($r = 0.51$, $p \leq 0.01$ level), Managing Relations ($r = 0.48$, $p \leq 0.01$ level), Integrity ($r = 0.48$, $p \leq 0.01$ level), Self Development ($r = 0.60$, $p \leq 0.01$ level) Value Orientation ($r = 0.62$, $p \leq 0.01$ level) Commitment ($r = 0.61$, $p \leq 0.01$ level), Altruistic Behaviour ($r = 0.59$, $p \leq 0.01$ level).

Therefore, the hypotheses of the present study that 'there exists a significant relationship between Emotional Intelligence and Professional Development of secondary school teachers' is retained with respect to Emotional Intelligence (Total) & its ten dimensions i.e. Self Awareness, Empathy, Self Motivation, Emotional Stability, Managing Relations, Integrity, Self Development, Value Orientation, Commitment, and Altruistic Behaviour.

Hypotheses 2: There exists significant difference in professional development of secondary school teachers at different levels of emotional intelligence

Data showing the Professional Development Differentials of Secondary School Teachers at different Levels of Emotional Intelligence is summarized in Table 2.

Table 2 depicts that the mean Professional Development score of high & moderate groups is 138.04 & 123.66 with S.D's 15.39 & 18.51 respectively. The obtained t – ratio comes out to be 8.45 which is found to be significant at 0.01 level of significance. Thus it can be inferred that the two groups differ significantly

Table 2. Significance of difference in the mean professional development (total) score of secondary school teachers at different levels of emotional intelligence

E.I Groups	N	Mean	S.D.	SEd	't'
High	200	138.04	15.39		
vs				1.70	8.45**
Moderate	200	123.66	18.51		
Moderate	200	123.66	18.51		
vs				1.89	6.90**
Low	200	110.63	19.26		
High	200	138.04	15.39		
vs				1.74	15.72**
Low	200	110.63	19.26		

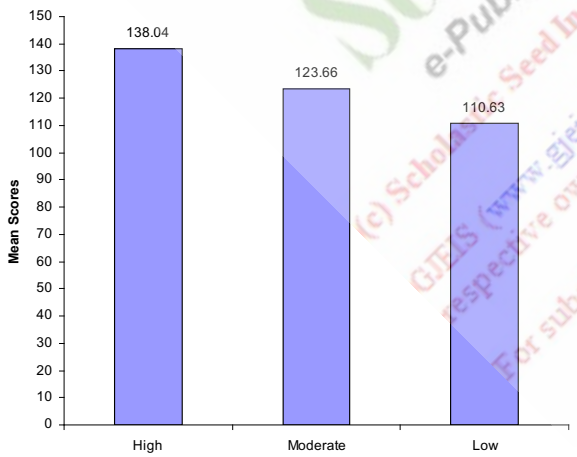
**Significant at 0.01 level

in their Professional Development. The mean Professional Development score of high emotional intelligence group is more than that of moderate group. It indicates that those teachers with high emotional intelligence are found to have better Professional Development than those belonging to moderate emotional intelligence group.

Table 2 further shows that the mean Professional Development scores of moderate & low emotional intelligence groups is 123.66 & 110.63 with S.D's 18.51 & 19.26 respectively. The obtained t – ratio is 6.90 which are found to be significant at 0.01 level of significance. Thus it can be inferred that the two groups differ significantly in their Professional Development. The mean Professional Development score of moderate emotional intelligence group is more than that of low group. It indicates that those teachers with moderate emotional intelligence are found to have better Professional Development than those belonging to low emotional intelligence group.

It can also be seen from the above table that mean Professional Development score of high & low emotional intelligence groups is 138.04 & 110.63 with S.D's 15.39 & 19.26 respectively. The obtained t – ratio is 15.72 which are found to be significant at 0.01 level of significance. Thus it can be inferred that the two groups differ significantly in their Professional Development. The mean Professional Development score of high emotional intelligence group is higher than that of low emotional intelligence group. It means high emotional intelligence group is found to exhibit better Professional Development in comparison to low emotional intelligence group.

It can be depicted from the graph (Graph 1) that the mean Professional Development scores of secondary school teachers of high emotional intelligence group is higher than that of both moderate and low emotional intelligence groups, it can be said



Graph 1. Mean scores of professional development at different levels of emotional intelligence.

that secondary school teachers belonging to high emotional intelligence group are found to have better Professional Development in comparison to the secondary school teachers belonging to moderate and low emotional intelligence groups. Further the secondary school teachers belonging to moderate emotional intelligence groups are better in Professional Development than the low emotional intelligence group.

Thus the hypothesis of the present study that there exists significant difference in the professional development of secondary school teachers at different levels of emotional intelligence is retained and it can be concluded that there is significant linear increase in professional development from low to moderate to high emotional intelligence groups.

7. Conclusion

The results of the study show that significant relationship was found between Professional Development of secondary school teachers and their Emotional Intelligence (Total) & its ten dimensions i.e. Self Awareness, Empathy, Self Motivation, Emotional Stability, Managing Relations, Integrity, Self Development, Value Orientation, Commitment, and Altruistic Behaviour.

When a comparison was made among the different Emotional Intelligence groups on their Professional Development, it was found that High Emotional Intelligence group showed better Professional Development in comparison to the Moderate and Low Emotional Intelligence group. Further, it was found that the secondary school teachers of Moderate Emotional Intelligence group showed better Professional Development in comparison to the Low Emotional Intelligent group. It means higher the Emotional Intelligence of secondary school teachers, better is their Professional Development.

As emotional intelligence is considered to be vital for success of the teachers, efforts and appropriate strategies are required for development of emotional intelligence skills among teachers. Educational institutions can play a great role by providing attractive and conducive environment that will motivate the teachers and enhance their commitment to their career and organization. There should be inclusion of training programmes for developing emotional intelligence in teacher preparation programmes which will result into a very long term effect on the teaching profession.

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Understanding the Anatomy of Talent Management

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Abstract

Global economic fluctuations had a major impact on the business worldwide and Indian organizations are not an exception for this phenomenon. This has hit the bottom line of the business, increase in operational costs, and decrease in revenue. As a result, the top management is forced to redesign compensation policies of the organization to retain the talented employees, who can take care of the business in the aforesaid circumstances. The growing size of the organization has further escalated the demand for skilled workers. This has made Talent Management a central activity for all the HR professionals. Talent management is all about policies and practices which takes care of employees and organizational needs in symbiosis, resulting in achievement of both short and long term success. Today's challenging business environment has made it clear to corporate leaders that talent management is imperative to organizational effectiveness, which is nothing but an outcome of skills and personalities of the employees. Easier said than done, Talent Management is a crucial and difficult task for the top management as well as Human Resource professionals. This paper discusses about organizations and talks about their strategy of managing talent pool.

Keywords: Global Economic Meltdown, Talent Pool, Skilled Workers, Strategies

1. Introduction

The complex nature of global business is putting an ever–increasing pressure on companies to be constantly on the lookout for incomparable talent in a market where demand is more than supply. Given the current focus on the linkage between talent and an organization's business challenges and strategies, effective strategy execution requires sufficient number of the right people with the right skills and knowledge, in the roles. Constant business necessities has resulted in aggressive competition amongst co–workers and increased employee turnover have intensified the need to acquire, develop, deploy, motivate and retain key talent. Getting right people with right skills into right jobs is a common definition of talent management which is a basic people management challenge in organizations. Talent Management is an implementation of integrated strategies or systems designed to increase workplace productivity by developing improved processes for attracting, developing, utilizing the required skills and aptitude to meet the current and future business needs[1]. While the talent management tends to focus on middle and top level management, HR managers should not do away with jobs that are hard to fill across the positions and levels. This has made talent management one of the most pressing issues facing senior business executives. Talent management is a hot topic for HR managers in organizations, both in service and manufacturing sectors. Interest in talent management has sharpened into a strategic imperative, as many organizations have begun to experience the so–called 'war for talent'. In 1997, Steven Hankin of Mckinsey & Company[2], coined the term war for talent, which refers to an increasingly competitive landscape for recruiting and retaining talented employees. McKinsey study also exposed the 'war for talent' as a strategic business challenge and a critical driver of corporate performance. Talent management is an umbrella phrase which includes employee recruitment, retention, performance management, skills and competency management, succession planning, redeployment, learning management, training, career development processes and internal career path. The ultimate goal of a talent management platform and strategy is to beat competition by deploying a better workforce by effectively identifying and developing the human power within the organization.

Muduli[3], states that the challenge of doing more with less in today's business environment has placed an increasing demand on workforce, to be multiskilled, flexible and independent, and it is very important for the top management to understand the importance of Talent Management Practices which is instrumental in the growth of individuals and organizations. Capacity utilizations, increased productivity, capability building,

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a better linkage between individuals' efforts and business goals, workforce commitment, reduced turnover, personalities and job fit are some of the benefits, an organizations draws from Talent Management while the employees experience higher motivation and commitment, career development, increased knowledge and contribution to company goals resulting in higher job satisfaction.

In India, despite the large population, the supply of manpower cannot keep up with the sharply increased demand. It is important for the organizations to have a right talent within to attract and retain the best available talent. The matter gets more critical as the skill dimensions differ significantly across sectors. The varying work practices across organizations and sectors puts pressure on HR professionals to tailor their talent management initiatives to match the business strategy. It can be further added that in order to effectively support business strategies, the leaders need to conceive, fashion and successfully champion explicit strategies to ensure sufficient talent flow and actively engage the organizations' talent to achieve business objectives. For an organization, there is nothing more crucial than fitting the right employee in the right position, as a mismatch would typically lead to disastrous situations. So, talent management serves the purpose of getting those on board whose skills suit the requirements of the job and then train them to enhance their skills and also retain good performers to achieve the desired objectives of the organization.

As depicted by Nayyar[4] in his book "Employees First, Customers Second: Turning Conventional Management Upside Down", people are the most important asset for any organization as one happy employee creates hundreds of happy customers. A lot of organizations are finding it difficult to create a link between their business strategy and people. The economic downturn has made the matter further difficult. This has been built further by Hudson Survey that economic crisis across the globe is putting further pressure on HR as Job Cuts, Pay Cuts, Lay Offs and retrenchments have become a very common feature in the organizations. Now is the time for HR Management to rise to the challenge and support the corporate strategy. The overriding preoccupation for senior management is driving revenue growth while controlling costs. It is important that HR 'frames' the discussion to ensure the board makes the right decision about staff and prioritizes cuts to ensure both growth and cost–reduction goals are reached.

This needs to be established in the context of talent management and retention. Businesses that uniformly cut costs often find themselves ending up damaging their ability to sell and deliver the products and services, customers value the most. Many alternatives can be offered by the HR like:

- Talk to management about alternatives to job cuts.
- Consider salary freezes or bonus reviews.
- Provide rotational assignments, new projects for relevant employees and also strong communication for business strategy and their role within it.
- Recommend key talent to senior management that needs to be retained and developed, and focus their efforts accordingly.

2. Literature Review

2.1 The Journey from Personnel Management to Talent Management

Talent Management has become one of the most important buzzword in the present scenario. In this article the researchers explain the history, principles, and processes of talent management and help the readers to understand the research agenda in this important area.

To understand the importance of Talent Management, it is imperative to explore the evolution of corporate HR[7] which has taken the current shape as a result of movement through three stages (Figure 1). Stage 1 was a typical Personnel Department, carrying out all routine mundane people management activities like hiring people, paying them, and making sure they had the necessary benefits. Similarly, in Stage 2 Personnel Department moved to Strategic HR activities where the HR had a much larger role to play like recruiting right people, training them, helping the business design job roles and organization structures (organization design), develop total compensation packages which include benefits, stock options and bonuses and also ensuring that employees had quality of work life & balance work–life in adequate proportion. The current era in Stage 3 focuses on Performance Management, Competency Mapping, Career and

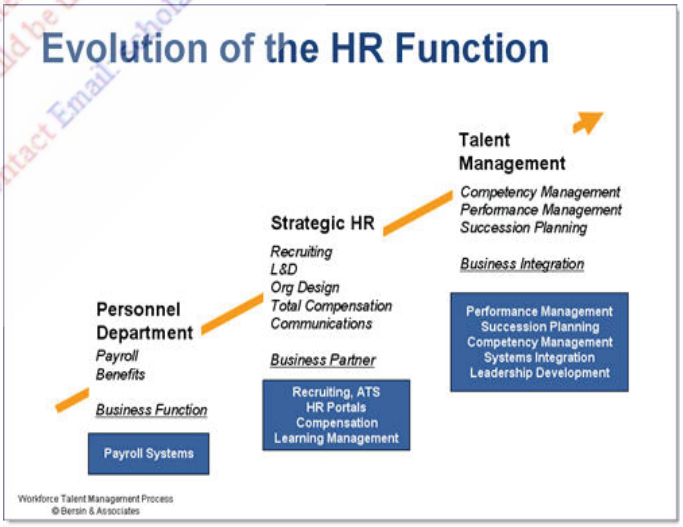


Figure 1. Evolution of the HR function[7].

Succession Planning etc and is famously termed as Talent Management.

These new and challenging problems require new processes and systems. They require stronger integration between the different HR silos—and direct integration into line of business management processes. Today organizations are starting to buy, build, and stitch together performance management systems, succession planning systems, and competency management systems. The HR function is becoming integrated with the business in a real–time fashion.

2.2 Talent Management Process

As an organization strives to meet its business goals, it must make sure that it has a continuous and integrated process for recruiting, training, managing, supporting, and compensating these people. As depicted in figure 2, Talent Management is a 8 step process, starting from Workforce Planning and ending at Critical Skill Gap Analysis.

The process begins at Workforce Planning which has to be integrated with the business plan, also focusing on hiring plans, compensation budgets, and hiring targets for the year. It is followed further by an integrated process of recruitment, assessment, evaluation, and hiring which brings people into the organization. The next logical sequence is on boarding ensuring that the organization trains and enables employees to become productive and integrated into the company more quickly. At step four, Performance Management ensures the organization establishes processes to measure and manage employees. The next stage is Training and Performance Support and this is a critically important function where learning and development programs to all levels of the organization are carried out. This is further capped by Succession Planning assuring as the organization evolves and changes, there is a continuous need to move people into new positions. Succession Planning, a very important function, enables managers and individuals to identify the right candidates for a position. This function must also be aligned with the business plan to understand and meet requirements for key positions in the near future. At the heart of the process is Compensation and Benefits Management which is an integral part of people management. Here organizations try to tie the compensation plan directly to performance management so that compensation, incentives, and benefits align with business goals and business execution. The process ends at Critical Skills Gap Analysis which is an important but often overlooked function in many industries and organizations. On a project basis, it can be 'business–critical.'

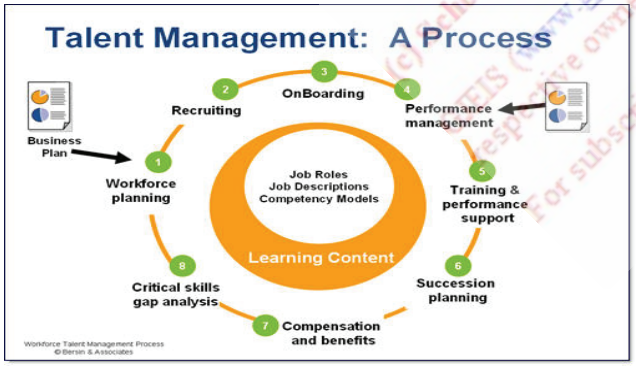


Figure 2. Talent management: a process[7].

2.3 Talent Management and Business Resilience: a Linkage

Given below are some of the strategies/initiatives an organization may adapt or focus in order to create and manage the Talent Pool which ultimately leads to organizational effectiveness and business resilience. The winners have created a workplace that balances work and life, keeps employees engaged and creates an atmosphere of trust.

The HR strategy that includes Performance Management, Training and Development, HRD Audit, Central to Talent Management Process can be considered to be contemporary and may result in escalating the employees capabilities & competencies. This approach also ensures that organizations create a logical work flow and process map that supports bottom line of the business.

In order to achieve organizational effectiveness and business resilience, organizations can implement talent management system to automate inefficient or manual processes for the documentation of various activities like training, licensing, certifications etc. It can be used to centralize the storage of an employee's credentials and competencies for easy access during audits. It also enables HR to focus on resources required to manage and coach employees. It helps in creating a link between employee and organizational performance.

A closer look at the aforesaid elements of Talent Management depicts that every step taken by the organization to manage talent will lead to business resilience.

Business resilience is a term for a collection of processes and procedures that enable a business to deal with unplanned and unforeseen events which is result of volatile and unpredictable economy across the globe. IBM defines business resiliency as "the ability of an organization's business operations to rapidly adapt or respond to internal or external dynamic changes–opportunities, demands, disruptions or threats–and continue operations with limited impact to the business." The famous management thinker Moss Ranter[4] says in her blog that "Resilience is the ability to recover from fumbles or outright mistakes and bounce back. But flexibility alone is not enough. You have to learn from your errors. Those with resilience build on the cornerstones of confidence—accountability (taking

responsibility and showing remorse), collaboration (supporting others in reaching a common goal), and initiative (focusing on positive steps and improvements).

The effectiveness and engagement of employees and bottom line of the business can be greatly enhanced by building resilience. The organizations always demand high levels of productivity and performance and business success depends on the creativity and dependability of the workforce. Employers want resilient employees, who can sail through uncertainty and ambiguity, and can handle change and pressure.

2.4 Implemention of Talent Management System

An organization must adopt the following practices for selecting, justifying and implementing a talent management system:

- An organization–specific business needs and expectations assessment must be done.
- The Talent Management System must fair on the costs, savings and ROI over the next three to five years, which should include the cost of training, hosting, maintenance, support costs etc.
- The implementation of Talent Management System must follow Kurt Lewin's three step model for change, where it must begin with organization–wide buy–in and awareness for the system to ensure smooth transition.

2.5 Talent Management and Succession Planning

One of the biggest challenges of Talent Management is managing skillful professionals at the top level and thus making Succession Planning as one of the most important activities HR needs to focus on. Succession Planning emphasizes that some jobs are very critical to the organization and cannot be left vacant or filled by any but the best qualified person. Succession Planning not only helps in managing talent at the top level but also is helpful in achieving mission of the organization as it creates an effective process for recognizing, developing and retaining top leadership talent.

Many times succession planning takes a back seat due to high amount of effort and cost involved in it. Cannon and McGee[6] in their book "Introduction to Second edition of Talent Management and Succession Planning" focus on the factors to be taken into account while carrying out Succession Planning for the key roles as well as other positions. They are summerised as follows:

1. To understand the importance of key roles for business sustainability.
2. To ascertain the criticality of the talent in the organization and to justify the investments in the retention strategy.
3. To gauge the lead time required for the replacements of the positions.

Hence, Talent Management with focus on Succession Planning helps the organization to sail through the tough times, where knowledge is the main driver of the business as well as economy, Talent Management is the only tool an organization can bank on.

3. Objectives of Research

Objectives of this research is to understand the

- Importance of Talent Management and its impact on Financial Performance of the organizations.
- Impact of Economic Downturn on Talent Management practices and also.
- Factors and drivers of Talent Management and the response and rating of these factors/drivers by the corporate world.

4. Research Methodology

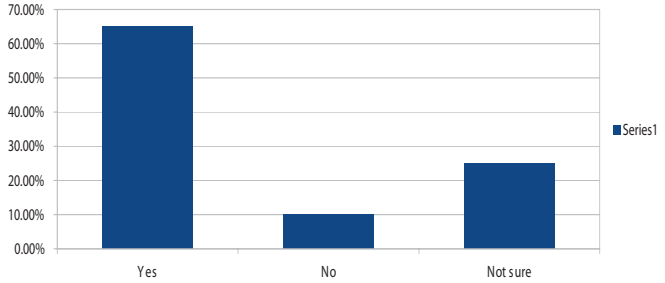
This is a descriptive research where the data has been collected through Primary & Secondary sources.

4.1 Data Analysis, Findings, Suggestions

The Data was collected with the help of a questionnaire from 30 organizations across the industries. The respondent's reaction have been captured and tabulated as given below:

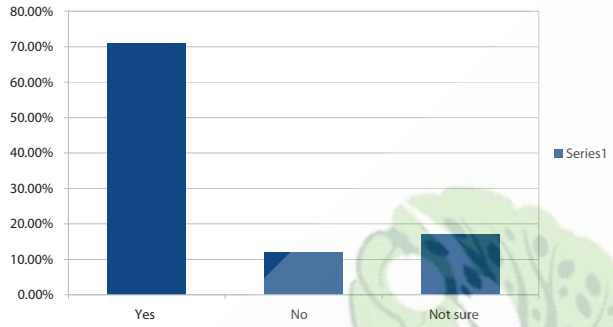
Q-1: Does your organisation consider Talent Management as a success mantra to grow your business?

Yes	65.00%
No	10.00%
Not sure	25.00%



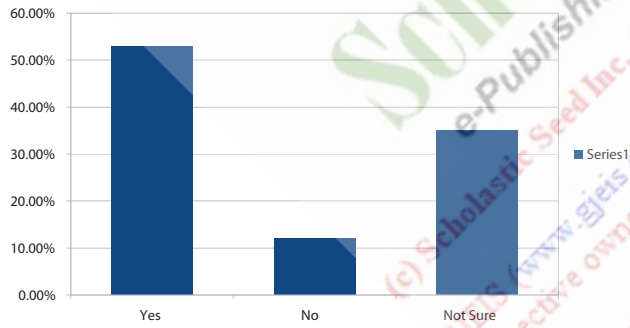
Q-2: Does your organisation adapt to best HR pratices for enhancing the talent pool?

Yes	71.00%
No	12.00%
Not sure	17.00%



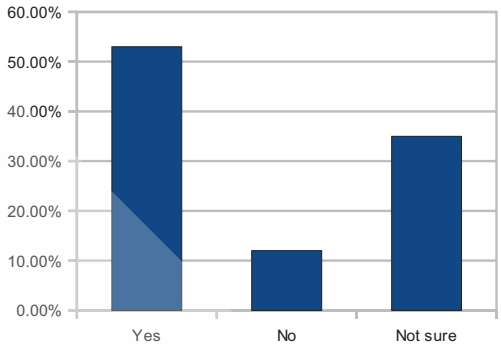
Q-3: Have you experienced any link between the efectiveness of telent managment practices and acheivement of financial goal of the business?

Yes	53.00%
No	12.00%
Not sure	35.00%



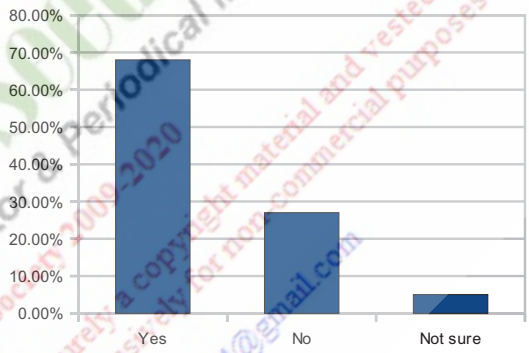
Q-4: Do you feel talent management practices have led to employee engagement & satisfaction?

Yes	59.00%
No	10.00%
Not sure	31.00%



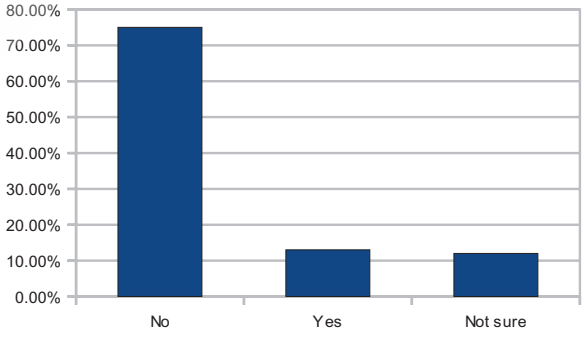
Q-5: Have economic fluctuations led to changes in your talent management practices?

Yes	68.00%
No	27.00%
Not sure	5.00%



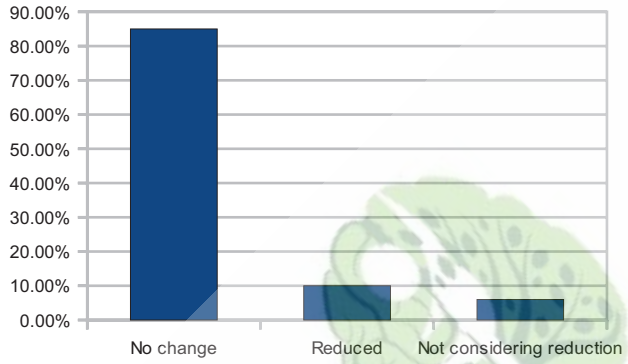
Q-6: Are you considering staffing-level changes due to economic downturn?

No	75.00%
Yes	13.00%
Not sure	12.00%



Q-7: Are you considering salary cuts or changes/ reduction in incentive structures due to economic downturn?

No change	85.00%
Reduced	10.00%
Not considering reduction	6.00%



5. Findings, Suggestions and Conclusions

The above research proves that majority of the organizations use Talent Management practices for better business results.

The organizations have aligned Business Strategy and Talent Management Practices which has led to better revenue generations.

Slower economic growth combined with scarcity of talent has pushed HR from transactional to transformational role. It has been further established while some organizations adopt the commonly used tactics like cutting down on staff and budget, while majority believe that a good Talent Management Practice can solve problems caused by economic fluctuations and changing workforce trends.

Even though Talent Management Practices are vital to organizational sustainability, there are very few tools to measure or quantify the benefits derived from it.

Talent Management has a direct impact on the job satisfaction of the employees and hence is directly related to the success of the organization. Both primary and secondary sources suggest that Talent Management is also linked to Financial Performance of the organizations as satisfied employees generally contribute to great extent in the growth & development of organization & self. Today's organizations must find out ways to attract the best talent and develop the skills to not only to satisfactorily perform the job but also need them to unleash the best potential to excel to the higher responsibility positions. A major challenge for the companies is to make the workforce stay longer with the company. However, environmental and economical issues can affect the talent management practices in a big way. It is time for the Indian companies to find out strategies to manage the talent in an efficient way.

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Competencies for Better Performance of Professionals for Mukta svādhyāya-pīţham: MSP

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Abstract

An ancient and multifaceted Indian language Sanskrit is being learnt through some programmes under Open and Distance Learning mode. **Rashtriya Sanskrit Sansthan** as a leading institution has innovatively established a distance learning institute **Mukta Svādhyāya-pīţham**: **MSP** (मुक्तस्वाध्यायपीठम्). This institution is working with a motto-स्वाध्यायान्मा प्रमद (svādhyāyān-mā pramada). This institute is expanding well with its capable human resources. Like any institute **MSP** needs the human resources very competent in accordance with their roles and responsibilities. This is more important in the changing situations.

In this paper the behavioural anchors are defined as characteristics of core competencies associated with the Distance Education management. Competency-based behavioural anchors are defined as performance capabilities needed to demonstrate knowledge, skill, and ability acquisition. Here are very essential, but seven limited competencies for every professional pursuing for qualitative development of **MSP**. Four **Academic**-Teaching and Learning, Communication, Assessment and Motivation and Innovation; and three **Administrative**-Planning, Leadership and Management are discussed in this paper.

Keywords: Distance Education, Academic and Administrative Competencies.

1. Introduction

Distance Education (DE) is not an unknown phenomenon in worldwide educational concerns. In simple terms, it is nothing more than a process of democratization of education. Actually it deals with more flexible and learner-oriented education. DE is characterized by a non-traditional approach which in effect existing norms of traditional education and seeks to provide a new orientation to educational processes. It is now growing with different technological advantages and innovative approaches to create an environment for every human being.

Swamy[1] rightly said that "Distance Education today has come to be accepted as a well recognised mode of education relevant to and necessary for meeting the emerging demands of the 'knowledge era'". This is fact that DE is playing now the crucial role in knowledge-based society. In 1992, Drucker[2] predicted that in the next 50 years, "schools and universities will change more drastically than they have since they assumed their present form 300 years ago when they organized themselves around the printed book." We can see more changes in present educational institutions and societies. There are various institutions establishing and re-establishing provisions for democratized education for all at every level. Some of them are applying the innovative mode of distance education, which is very effective for socio-economical development of human resources.

With rapid changing time, DE is being considered to enhance the lifelong learning and creates an environment which is easy accessible to deprived and backward learners as well as advanced learners who want to continue their learning. DE exclusively serves to learners in accordance with their socio-economic needs and aims to be individualized, interactive, and independent of time, emphasizing learning over teaching.

Rashtriya Sanskrit Sansthan-a deemed university under MHRD, New Delhi, is a leading and nodal agency of central government for Sanskrit language. The Sansthan as deemed university and multi-campus institution has ten campuses in nine

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Indian states. The Sansthan is providing the quality education for senior secondary to post graduation and furthermore for research level degrees in Sanskrit and concerned disciplines. As an innovative institution, Sansthan has recently established a distance learning institute **Mukta Svādhyāya-pīṭham**: **MSP** (मुक्तस्वाध्यायपीठम्).

This institution is working with a motto-स्वाध्यायान्मा प्रमद (svādhyāyān-mā pramada) means don't be indolent for study (http://www.sanskrit.nic.in/msp.htm). As distance education institution, it is planning and managing the opportunities to learn about Sanskrit language and literature, and to promote non-formally the heritage of ancient Indian knowledge to all learners. The vision of MSP is very clear to projection of a global perspective of Sanskrit learning. Through the open education many learners find non-formal situations to connect with Sanskrit.

The head office in New Delhi and ten campuses in nine states are study centers of MSP to deliver the learning activities and learner-support services. All centers are being managed by some professionals including principal (who plays also the role of director for DE), coordinator and co-coordinator. These professionals are most responsible persons to execute all activities i.e. admission, conducting the contact programmes, counseling and other support services. The topic of study is identified to study the competencies of the professional as human resources, because the competencies play an essential role in open and distance education system and the success of DE system depends on these competencies.

All professional competencies will be categorized into two groups: academic and administrative. Both competencies deal with core and functional competencies. Academic competencies mean communicational, teaching/course development, tutorial, student support service, and research and evaluation etc. administrative competencies deal with planning, leadership, supervising and controlling etc.

2. The Rationale of the Research

The rationale of the project is very clear. Without any suitable competency, the human resource of any institution at any level will be no more able to succeed. There is essentiality of competencies in any institution. In distance education, there is a need of different competencies in human resources in accordance with the roles and responsibilities. The situations of distance education are changing every day and the researchers are trying with different views and objectives.

There are some researches that show the importance to think of competencies regarding to distance education institutions. Williams[4] identified thirteen roles and thirty general competencies as well as role-specific competencies, and observed that roles of leader/change agent and trainer emerged as significant for successful implementation of distance education programs. Interpersonal-related and communication-related skills were necessary across all roles and dominated the top ten general competencies. Further he stated that institutions of higher education can use the results in the staffing of distance education programs and in the design of staff/faculty development. Next He cited Rothwell and Cookson (1997) provided a review of various competency studies that have helped define roles and competencies of human resource development professionals.

Again Williams[5] stated here the general competencies are a foundational skill set that can be considered entry level for any of the roles. They include competencies related to communication and interpersonal skills, administration and management, technology, and instruction. The level of mastery of a general competency will vary from role to role. Some of the general competencies are primary to one role, such as change agent skills to the role of leader/change agent, for example, and secondary or tertiary in the function of other roles. Dooley[6] studied through a developed a self-assessment instrument to document growth in distance education core competencies. The authenticated results were reported in three areas: individual and average growth in core competencies, open-ended verification of growth, and attitudinal change. These are basics for effective operations of all distance education programmes.

Levy[7] *classifies* six areas as factors to plan perfectly any online programme in higher education: vision and plans, curriculum, staff training and support, student services, student training and support, and copyright and intellectual property. Here the Staff Training and Support is basic factor to be willing to adopt this new learning paradigm. Instructors need to be cognizant of how the details of their course will be implemented in the new environment. Effective ODL requires the instructor to not only have knowledge of the content area, but also to have interpersonal skills to effectively communicate with their students online[8]. Instructors will be assuming a broader role as planners, designers, guides, mentors, and facilitators and will no longer be seen as leaders and lecturers[9].

Dooley[6] have new ideas about the skills and competencies through SWOT analysis. They found that higher education institutions increase the use of technology to further distance education initiatives, it is important to recognize the role that perspectives within the institution play in formulating a strategy for effective development and implementation of distance education. This study seeks to provide insight to these perspectives by examining the strengths, weaknesses, opportunities, and threats. The perspectives of administrators, faculty and support units were not found to be dramatically different, in

fact many of the perspectives were the same. Based on Rogers' attributes[10], it was concluded that the rate of adoption of DE technologies could be enhanced through revised policies/procedures and the development of strategies to address critical issues.

Determining competencies needed for a given profession is an important first step, but the difficult task is in trying to measure and verify that competence! Industries, as well as universities, are struggling with appropriate techniques to document professional growth and learning over time. One method for addressing this problem is to develop and use competency-based and behaviourally anchored rating scales to measure student growth. In this study, behavioural anchors are defined as characteristics of core competencies associated with the mastery of content. Competency-based behavioural anchors are defined as performance capabilities needed to demonstrate knowledge, skill, and ability (competency) acquisition. Competency-based behavioural anchors require considerable time and effort to develop; however, they provide more accurate judgments than item-based scales (Buford & Lindner, 2002).

In present situations, the next generation of learners appeals the fact that the professionals should carry on to play. Second, if the human resources want to improve their quality and develop professionalism in their tasks, they should have the opportunity for self-assessment and very positive attitudes to it. Definitely the project will be accepted as self-assessment by human resources of MPS. Third, in Sanskrit educational scenario, this project will check the suitability of contemporary efforts of MPS as well as other institution willing to create new dimensions with deep regards at all levels for quality Sanskrit education especially at higher education level, where education is required very specialized and democratized.

3. The Objectives and Research Questions

The objectives of this study are to investigate the status of the basic competencies in human resources working in MPS for distance education in the field of Sanskrit language and literature. The study further shows to develop competency based behavioural anchors for that human Resources. The study will be accomplished with following three objectives:

- To assess the level of competencies of professionals working in MSP.
- To create an opportunity to self-assessment for professionals working in MSP.
- To suggest to improve the role and quality of professionals working in MSP.

The following are two research questions that were accepted:

- What are the academic competencies the professionals have?
- What are the administrative competencies the professionals have?

4. The Methodology

The study occupies a systematic and scientific approach in the sense of a process. The process is called methodology in behavioural terms. Kerlinger[11] rightly introduces that scientific research is systematic, controlled, empirical and critical investigation of natural phenomena guided by theory, and hypothesis about the presumed relations among such phenomena.

In this study, the researcher has accepted a very concise but systematic process to for a behavioural design including sampling, constructing of a tool, data collection, and analysis. The descriptive or Standard Survey Method is accepted in this study. This method helps a researcher to find out the actual status of various aspects that are concerned with a problematic issue. There are certain reasons to accept such a method. First reason is to identify the nature of current situation or occurrence. Second one is to compare the situation in standardized perspectives. Finally this study is based on survey method and without any contradiction and assumption. A genuine idea is accepted to know the present situations of professionals as MSP needs for better performance.

5. The Sampling

In this study, the population was very limited and the researcher found no difficulty to communicate with all members of MSP. And there was no need for any sampling technique as provability or non-provability. All members were contacted through the questionnaire and genuinely requested for responses in August 2011 to March 2012. After all only thirty members cooperated for data collection. Some members were communicated more than six times through e-mail, telephone and personally. The other professionals were also communicated through email and face-to-face contacts, where the coordinator or co-coordinator was not found, and sometimes the other professionals were working very sincerely for every activity i.e. teaching and learning, counseling, planning, leading and assessing and so on.

The detail of all members is being presented in next Table 1. The all members are shown in two categories as contacted and received the responses successfully. As presented in the Table 1, there are eleven of institutions. All professionals are separately classified into four categories.

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Table 1. Details of all professionals: communicated and responded

Professionals for Distance Education		State	Director and Dy. Director/ Principal		Coordinator		Co-Coordinators		Other Professionals	
			PC*	PR**	PC	PR	PC	PR	PC	PR
S. N.	Campuses		(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
1	Administration/ Head Office, New Delhi	Delhi	1+1	0+0	1	0	2	2	2	2
2	Jammu Campus	J&K	1	0	1	1	01	1	2	2
3	Lucknow Campus	U.P.	1	0	1	1	01	1	2	2
4	Allahabad Campus	U.P.	1	0	1	0	1	0	1	0
5	Puri Campus	ODISHA	1	1	1	1	1	1	2	2
6	Trichur Campus	KERALA	1	0	1	0	1	0	1	0
7	Shringeri Campus	KARNA.	1	0	1	1	1	1	1	1
8	Mumbai Campus	MAHA.	1	1	1	1	1	0	1	0
9	Bhopal Campus	M.P.	1	1	1	1	1	1	2	2
10	Jaipur Campus	RAJ.	1	0	0	0	1	0	1	0
11	Garli Campus	H.P.	1	0	1	1	1	1	1	1
Total			12	3	10	7	12	8	16	12

*PC–Professional Communicated, **PR–Professional Responded

6. The Study Tool

A Questionnaire was constructed by study holder under supervision of study-tutor and experts. The seven categories were decided first according to seven competencies and fifteen to twenty five statements to each category. These categories are conceptualized according to seven competencies assessable for the study. *After initial item analysis and useful suggestions of tutor as well as experts, there are different quantities of statements in each category.* Finally, the questionnaire has eighty statements in all seven categories. *There are four options to each statement: always, frequently, sometimes, and never.* For more accuracy, there are some statements having negative implication and mixed anonymously. The statements are being presented here according to each competency in two categories positive and negative.

7. Data Analysis

The data was analysed twice as decided for research questions. First all eighty statements were classified into seven categories in accordance with seven competencies including four academic and three administrative competencies. The respondent had four options to each statement. The four options are following as Always, Frequently, Sometimes and Never. The score was analysed with percentage.

Second, the level of all seven competencies was identified on summative percentage of all statements grouped for an individual competency. Here the statements were scored differently. Positive statement was scored as 3 to 'Always', 2 to 'Frequently', '2' to Sometimes and 0 to Never. And the negative statement was 0 to 'Always', 1 to 'Frequently', 2 to Sometimes and 3 to Never. Finally all scores were analysed according to a single competency. The scores were reanalyzed as summative to a competency. The analysis is being presented in the next Table 2.

As Table 2 reveals the highest score has been identified as 64.19% of leadership and the lowest score as 51.11% of Communication competency of all professionals. Here motivation and innovation competency and Management also occupy better situation.

8. The Implication of Two Research Questions

The Table 2 presents the answer to two research questions:

1. **What are the academic competencies the professionals have?**
   Answer: The professional have four basic academic competencies as better is motivation and innovation. Further they have teaching and learning and assessment. The level of communication is still low among all academic competencies.

Table 2. Analysis of the Academic and Administrative Competencies (On the basis of summative score)

Academic Competencies		
S. No.	**Competency**	**Summative Score**
1.	Teaching and Learning	56.13%
2.	Communication	51.11%
3.	Assessment	55.37%
4.	Motivation and Innovation	62.57%
Administrative Competencies		
5.	Planning	59.59%
6.	Leadership	64.19%
7.	Management	60.83%

2. **What are the administrative competencies the professionals have?**
   Answer: The professional have three basic administrative competencies as better is leadership. Further they have competency of management. The level of planning is still low among all administrative competencies.

9. Conclusions

The all interpretation shows that the human resources of MSP have the average level of professional competencies as the cumulative scores were found 51.11% to 64.19% to all seven competencies. The competency of leadership has better situation rather than all remaining six competencies and the competency of communication which deals with academic and administrative functions was found very less than other competencies. Now it is realized that the situations are very indicative:

- In teaching activities, the professionals are using the technology-driven presentation, and methods. They simply apply the multimedia and reference materials. For further learning they are interested to attend the seminars, to knowledge and application of technological advances, and some skills for better professionalism.
- It is other point that they have no better skills related to communication competency, but the human resources also indicate to be aware about the public awareness, long term goat-setting of communication.
- For assessment, the human resources show the skills of using computer technologies for assessment, recognizing the readiness of learners, and evaluation based on performance.
- This is found that the resources have basic skills that lead the motivation and innovation as they share the learning experiences with learners, stimulate the tendencies and inform the learners for further jobs.
- Next competency deals with planning. The professionals have basic skills related to this competency to plan for desired goal, to think on action planning, and assimilate the self experiences.
- The professionals are found good leader too. They help for problem solving, delegate the duties; develop the team spirit among the stakeholders and peer group. Further they work for learners, satisfaction.
- For quality management, the professional arrange, facilitate and promote the overall positive system to optimum utilization of concerned resources. They manage the facilities available in the institutional resources for every learner.

10. Recommendations

This study is very specific and carried on in short terms to understand the basic levels of professional competencies of human resources. But here are some recommendations at both levels: academic and administrative level.

For academic level:

- The human resources should pursue for more learning opportunities to execute better the teaching activities. They should initiate the innovative teaching strategies based on adult psychology and adult learning pedagogy.
- Communication should be based on interpersonal relationship and feedback. The information should be communicated and enabled through the technological advancements.
- The methods of assessment should be more learner-centered and the other aspects of learning as affective should also be assessed as basic learning.
- To motivate the learners, the professionals should stimulate the attitudes and maintain the pace of learning with innovative thinking.

For administrative level:

- The professionals should rethink the policies and plans in accordance with local and regional perspectives. They should consider further the most suitable planning frameworks for effective implementation.
- Leadership is functional element of any management. The professionals should lead the institution with spirit of team membership.
- For total quality management of MSP as distance institution, the professionals should develop the critical thinking through the institutional resource analysis approaches. They should build self-responsibilities for bottom to up organizational setup.

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IT and Conservation of Biodiversity

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Abstract

The boom of Innovation and research marks this century. But the major questions that arise are: Is it sustainable? Is it conducive to the mother earth? Very late human being realized, in his quest for easy life, comfortable life, and greed for achievement that he has actually made the parable of "The Goose with the Golden Eggs," come true. Human being in the race of advancement has dug its own grave.

This study investigates the speed with which religious activities are polluting the water bodies and destroying the rich biodiversity. A survey between 2010 and 2013 was conducted which highlights the destruction of environment that is going on which has ruined the ecological balance and is heading towards destruction of biodiversity. The study, in the backdrop of floods at Kedarnath, Mumbai and Nagpur area, highlights what can be done to save humanity and the rich biodiversity of India.

The key finding is that there is an urgent need to take steps to prevent religious and tourist places from mass tourism. Another, major step to be taken is restricting people from immersing idols and dumping of the wastes in the water bodies or man will be an extinct animal from this globe. The ray of hope is to take steps to prevent negative footsteps of human kind to prevent disasters. IT companies can play major role in conserving Biodiversity by promoting eco friendly idols and giving simulated experience to religious events.

Keywords: Pollution Biodiversity, Solid Waste Sustainability, Idol Immersion.

1. Introduction

Man is the creator and the destructor of the environment since the environment is the sum total of all biological, chemical, physical, and economical activities of mankind. Man paid no heed while destroying the niche of the native people, who thrived on the natural resources. He even denigrated the natural resources and restricted the geographical space of the animals. His innovations have resulted in massive break down of the system and also of the mother Earth. The recent times have started to show the impact of such negative growth by taking man in his loop of destruction by indirectly affecting him. Man should have had a plan for maintenance but, now is on the run for break down maintenance because of his over indulgence and negligent attitude towards environment and sustainable growth.

Man is the creator and the destructor of the environment since the environment is the sum total of all biological, chemical, physical, and economical activities of mankind. Recent times, has witnessed the consequences of digressions of mankind with nature and the disrespect that he had shown for the planet Earth of which he is an inhabitant. These pollutants have led to great health hazards like birth of high risk neonates, children with malnutrition, increase in cancer and respiratory disorder.

An innovator while looking for innovation looks at the target customers, the way his organization and he would be benefited by his innovation and research, but he keeps a blind eye to the people who would be affected, the environment and the geographical space of the animals that he is going to destroy.

The consumerist society with their greed has exploited the resources of the earth but failed to see what is the impact of pollution even in the minds of the children that, a child of ninth standard expresses herself thus:

"Pollution a problem of global concern.
Weary concern burnt the nation bare.
Ignorance - the procreator of pollution,
It rolled it to devastation.

Industries throw effluents in water,
Which makes its purity shorter.
The vehicles spit smoke and dust,
And pollute the earth's crust.

People cut forests for daily use,
And make the nature's misuse.
Very loudly people blow their horns,
In the way of pollution free economy, sow the thorns.

* Author for correspondence:

The health of people it has affected,
A danger to survival of life it has erected
People throw waste here and there,
Of land pollution they do not care.
Pollution has raised the earth's temperature.
This has led to extension of many large small creatures,
Pollution has made the nature to weep,
It has also made many problems to creep...[5].

BBC has reported recently that the problem has increased immensely and a condition has become so grave in Beijing in China that children have started living a box existence. They prefer schools that have even playgrounds inside glass dome where pure air is provided artificially. Everyone is advised to move with a mask. India is also on the same track. Metro cities are getting highly polluted. In Delhi smog was reported several times. Many cities teenagers wear mask as shown in the Figure 1.

The recent floods of Kedarnath and Nagpur and a few years back in Mumbai are a reminder to the humanity of the evil deeds of mankind for which he must feel guilty. These are some examples of how fragile and susceptible, human being has become to various natures' hazards.

Kedarnath floods destroyed millions of people and many were stranded for a long time in Kedarnath. It has become a ghost town. A popular religious destination where people in thousands flocked every year has been deserted. The mountain on which the temple sits had become fragile because, of illegal construction of hotels. The construction exceeded far more than the capacity of the land. The path of water movement was congested and destroyed. Similar was the case in Mumbai and Nagpur this year for the first time in life. The cement construction had reduced the land which could absorb water.

When the water flows in excess then naturally there is no place for its absorption and the flash floods cannot be directed through channels and absorbed.

Figure 1. Movement within cities is with mask because of high level of pollution[1].

Petley[10] has analysed the situation at Kedarnath. Figure 2 helps to arrive at a plausible scenario as to what had caused the massive tragedy at Kedarnath virtually annihilating it. The flow surged down further and caused heavy devastation downstream as well.

According to Petley[10], the tragedy was because of two reasons: '(i) landslide-induced debris that came from the glaciated area in the north-east and (ii) a glacial-related flow that originated from the north-west glacier.' The images present distinctly the two flows.

Petley, from his analysis of the images confirmed that debris flow was the reason for disaster.

Petley has also clearly explicated the formation of Chorabari Tal as called by the locals. In fact, this was a popular tal where pilgrims trekked a few kilometres along the west side of the valley to have a dip. The Chorabari glacier has been retreating constantly in modern times, and according to D.P. Dobhal of the Wadia Institute of Himalayan Geology, 'it has retreated about 300 m since 1960.'

"The effect of the retreat is to leave a moraine that can allow lakes to form, which can then collapse," pointed out Petley in an e-mail message to *Frontline*. "In Kedarnath, this is exactly what had happened," Petley added.

'A wall of water was formed that swept the Kedarnath town in a flash because the moraine had been breached by the rapidly building up water due to heavy rainfall and the water overtopping the moraine wall which led to the sudden release of large volumes water and resulted in a massive wall of water sweeping

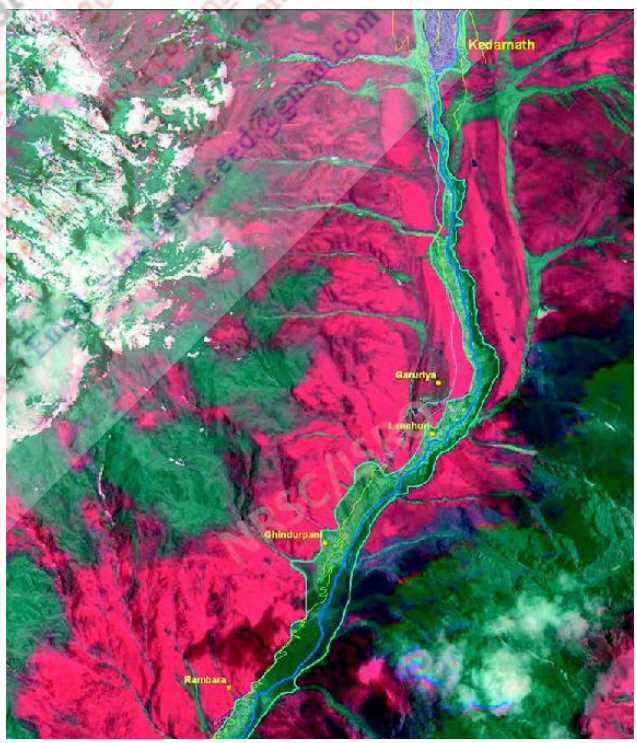


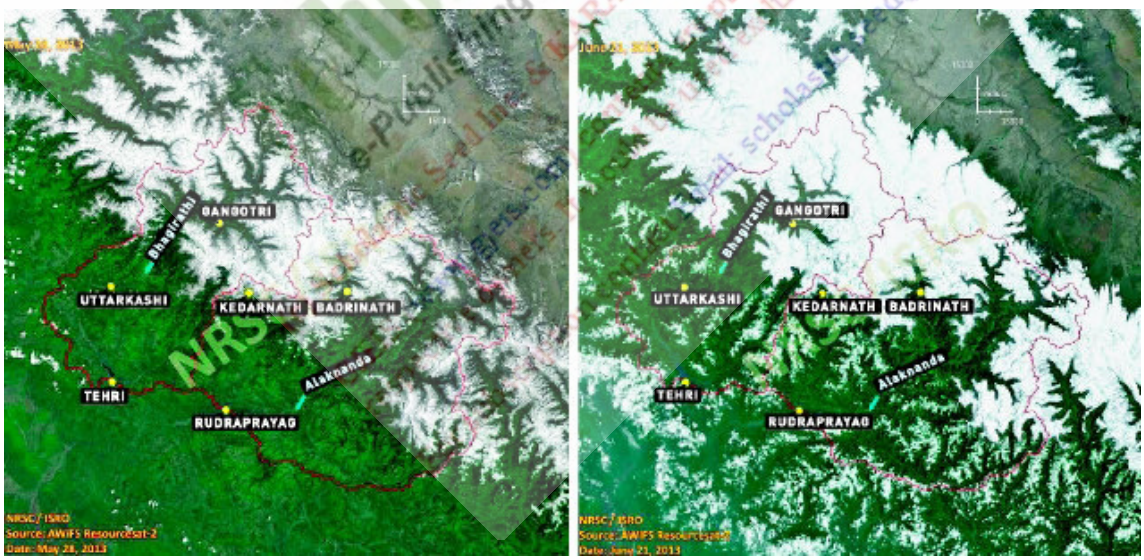
Figure 2. The flood-affected area in Kedarnath analysed on the basis of Resourcesat-2 satellite data[2].

across the Kedarnath valley and the town and causing a huge flash flood', Figure 3 clearly indicates the phenomenon[8].

There are a number of rivers in India that exist only on maps but they are no longer in actuality. The rivers have got blocked because of dumping of solid wastes by the industries and household. A number of lakes have become infested with weeds and solid wastes.

Another major reason, of choking of many lakes and rivers, is due to sedimentation because of religious customs of immersion of water idols in the lake. The idols are painted with poisonous chemicals, which add to the toxicity of water bodies. It has been observed that Nag River in Nagpur has been given new life in the year 2013 by removing the blockages due to dumping of solid waste by Gutkha companies and other household waste. Now, water flows through it profusely. Similarly, Mahegenco plant had also been fined for dumping fly ash in Kanhan river and had been asked to remove from the water body. The fly ash is being used for useful purpose, to control pollution from the cement plants. Similarly, restriction of dumping of wastes in water bodies can protect the environment through sustainable development and help protect Biodiversity which India can boast about.

The various sources of water pollution are: Marine dumping, sewage and waste water, like industrial waste, plastic bags disposed in the water, Radioactive waste, Oil pollution, underground storage leakages, atmospheric deposition, global warming and eutrophication. Waste that can be utilized, in the industrial processes, should be dumped on the land far away from the natural environment instead of water bodies. Waste from the houses should also be recycled and dumped far away from the city. Nag River in Nagpur was destroyed by throwing waste in it but, after efforts of the Nagpur Municipal Corporation it was revived. There was a penalty on dumping waste in the river and a CCTV was put there to catch people and fine them heavily. In many parts of India there is a culture of immersing Ganpati, Durga Devi idols and tajia's in water bodies. These idols are made from plaster of paris which is non decomposable and reduces dissolved oxygen in the water bodies and chokes them. The paint has poisonous chemicals which add to the toxicity. The idols that are worshipped so fervently are dumped like filth, which choke the water bodies and kill biodiversity. Figures 4–6 project appalling and highly sorry picture of the religious rituals followed by Indians. Moreover, the water becomes toxic and kills biodiversity. Researcher in several parts of India studied the effect of floating God idols in lakes and came to similar conclusion. Reddy and Kumar[3] studied lakes in Hyderabad and also came to the same conclusion that floating of Indian Idols destroys biodiversity. A research team sampled water repeatedly from different parts of the Eutrophic Hussainsagar lake (Hyderabad, India): …. including one spot "immersed with hundreds of multicolored idols of Lord Ganesh and Goddess Durga", and another near "the outfall of black-coloured, untreated raw sewage containing a collection of industrial effluents". Sewage, they conclude, accounts for most but not all of the pollution. High levels of zinc, calcium and strontium "were probably due to the immersed idols painted with multicolours"[1]. Shukla[4], also studied several lakes in Bhopal and pointed at the toxic impact of immersing idols and tajia's.



3a. 3b.

Figure 3a and 3b. NRSC scientists say the pictures indicate that the glacial regions above Kedarnath had received fresh and excess snowfall when heavy rainfall hit the region[2].

a b c

Figure 4. (a,b,c). Multicolored idols of Lord Ganesh.

Figure 5. Waste after immersion of Idol of Lord Durga Kolkotta.

Figure 6. Immersion of idols in Ganges Kolkotta India.

A similar study of sample in Tapi river in Surat Gujrat, India reveals "at morning hours during pre-immersion, during immersion and post-immersion periods of Ganesh idols". The conclusion: the "main reason of the deterioration of water quality… is various religious activities", with special blame given to "the plaster of paris, clothes, iron rods, chemical colours, varnish and paints used for making the idols[6]".

There are a number of NGO's working along with Media in Nagpur, India to protect water bodies from this religious activity of immersing idols and tajia's. A major step that was taken was to put artificial tanks (Figure 7) for immersion of idols, restricting the construction of POP idols by bringing legislation and promoting use of eco friendly idols.

Times of India had staged road shows and in Ganesh Pendals in Mumbai for promoting the use of eco-friendly Ganesh idols (Figure 8).

A number of countries have made a move to reduce the ever increasing environmental problems by forming meaningful legislations. Yet global climate change, rapidly decreasing biodiversity and growing extinction rates, dwindling resources, deforestation, worldwide over fishing, and pollution still remain a challenge and a serious threat to the environment.

Environmental issues are closely linked to human rights, animal protection, and economic and political issues. For example, starting polluting industries in poor neighborhoods is both an environmental and social justice issue. Another, global issue is the burning of fossil fuels which leads to pollution, acid rain, and climate change. These problems, in turn, lead to poor human health and increase in weather-related disasters. Natural resources ownership by multinational corporations, e.g. water, causes shortages–for humans and animals alike – and contributes to poverty. Spreading of urban boundaries leads to decreased biodiversity and habitat which in turn, increases competition for limited space and resources. All of us depend on the natural resources for our survival, so every environmental issue becomes an issue for both humans and even of animals.

Figure 7. Artificial tanks for immersing idols during Ganesh Chaturthi 2013.

Figure 8. Times efforts in promoting use of eco-friendly Ganesh idols in Mumbai 2013.

2. Challenges being Faced by India

Wikipedia quotes: "Major environmental issues are forest and agricultural degradation of land, resource depletion (water, mineral, forest, sand, rocks etc.) environmental degradation, public health, loss of biodiversity loss of resilience in ecosystems, livelihood security for the poor"[9].

India must wake up to face the challenges to control the pollutants coming from the rampant burning of fuel wood and biomass such as dried waste from livestock as the primary source of energy. Poor organized garbage and waste removal services, poor sewage treatment operations, lack of flood control and monsoon water drainage system, diversion of consumer waste into the rivers, cremation practices near major rivers, highly polluting old public transport, and continued operation by the Indian government of government owned, high emission plants built between 1950 to 1980.

India's water supply and sanitation issues are inextricably linked to many environmental issues. Environmental issues are one of the primary causes of disease, health issues and long term livelihood impact for India.

3. International Conventions

Summits such as the Earth Summit in Rio, Brazil, 1992, were major international meetings that brought sustainable development to the mainstream. However, the record on moving towards sustainability, so far appears to have been quite poor since the concept of sustainability has many different meanings to different people, and a large part of humanity around the world still live without access to basic necessities.

4. IT and Conservation of Biodiversity

IT companies can play a major role by creating eco friendly digital idols and providing simulated rich experience not only to the individuals, but also to the entire congregation. Baby steps in these directions have been taken by creating digital idols, but a major thrust as far as advertising it and giving a community experience is still necessary.

5. Conclusion

The tragedy at Kedarnath and new life to Nag river in Nagpur has given lessons of life. The lesson learnt is that careful planning of

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tourist areas unauthorized construction and over exploitation of resources should be avoided. Nag River's revival has given new life to a number of biodiversity and to people living in the area. Idols should be made from eco friendly material painted with food or natural colors. Idols should be immersed in Artificial lakes. Steps taken for sustainable growth can salvage us from the denigration of the earth. Every individual should become responsible and take measures to reduce carbon footprints. Innovation and research before its implementation should focus first on the negative impact that it will have on the environment, the people and biodiversity.

6. Aknowledgement

I would like to acknowledge the devotees who polluted water bodies that gave me a clue to write this article and my daughter Ishita who wrote the poem for this article.

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BOOK REVIEW

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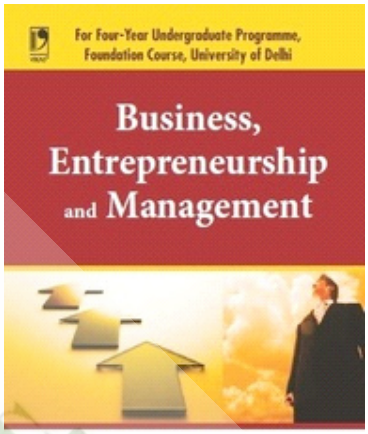
Business, Entrepreneurship and Management

V S P Rao



Citation

Rao, V S P (2013) Business, Entrepreneurship and Management, Vikas Publishing House Pvt. Ltd.

Review

The foundation course entitled Business, Entrepreneurship and Management is designed to keep students at the centre stage and motivate them to examine closely the social and cultural contexts of entrepreneurship. Therefore, the book authored by VSP Rao, completely serves the purpose of providing basic reading material for the students who are already familiar with the concepts through their discipline and also for students from different disciplines who may not have the previous knowledge of this subject. The book has four broad themes–*Entrepreneurship, Business, Market and Society and Management*. These themes promote an awareness of how an entrepreneur thinks, acts, creates a connection with the society and manages affairs of business and organisation. The themes have been further divided into sub themes–firstly, the important characteristic features of entrepreneurs, including their mindset, creativity in their work, the risk involved, how they arrive at the decisions, what makes them work so hard, secondly, the concept of business, factors which promote or restrict the growth of business, why business needs to have a technological edge, role of e–commerce and m–commerce, ethical considerations that has to be kept in mind to be ethical and socially responsible, thirdly concept of market, factors affecting the demand and supply, how consumers actually choose products and services and show doors to firms that do not produce according to their choices and finally, talks about how mangers work in order to blend technology with human and financial resources successfully.

The book has been designed to give the learners an insight into business, its concepts, types and culture and to acquaint them with the concept of entrepreneurship, to comprehend the interface between market and society and to help them understand the concept of management. Several activities and projects relating to practical situations, case studies and topics for discussion and analysis has been incorporated by the author in the book to facilitate better understanding of the concepts. The divide between precept and practice has been bridged by presenting the textual matter with appropriate doses of real–life examples and insights from exciting world of entrepreneurs. The author has taken recent examples from journals, newspapers, magazines to convey the excitement and dynamism of the discipline. A simple and reader–friendly style has been used by the author while writing this book. Each lesson has a list of carefully selected questions that will help the students revisit and apply the learning in critical fashion. The appendix provides experimental exercises and games related to business, case studies and stories about successful entrepreneurs.

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BOOK REVIEW

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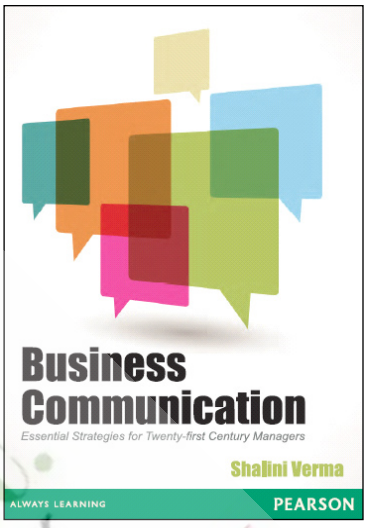
Business Communication: Essential Strategies for 21st Century Managers
Shalini Verma



Citation

Verma, S (2013) Business Communication: Essential Strategies for 21st Century Managers, Pearson Education.

Review

We all are witness to the fact that the globalized and liberalized 21st century has made a pragmatic and a very obvious shift from production economy to a knowledge economy. No longer do the manufacturing units or machines, to be more precise, give a competitive edge to any organization or economy of any country but its human capital with their ever evolving 'grey matter' makes all the difference in this uncertain, risky, complex and competitive business environment.

The growing pressures from all the sides, to match global standards, further push the organizations towards modernizing their hitherto communication mode, medium and strategy. Under such challenging demand of the hour comes the book *Business Communication: Essential Strategies for 21st Century Managers,* written by renowned author, Dr. Shalini Verma and published by Pearson. The book adopts an integrated approach which for the first time weaves together the application based knowledge and the necessary workforce competencies in the field of communication to enable firms to compete successfully in the hyper-competitive global marketplace. The book attempts to keep the managers abreast with the technologically advanced communication means, modes and tools in order to connect better with the world around them – people; processes; surroundings – professional, social, and cultural thereby enhancing their career growth and success rate in the competitive job market.

Business Communication: Essential Strategies for 21st Century Managers delves into the real issues faced by the real organizations/people at the work place, their on-job communication challenges, their communication strategies to overcome those challenges and their use of multiple communication channels to keep pace with time. The book has been systematically organized to suit the needs of its users and is divided into five distinct parts namely – Basics of Business Communication; Organizational Communication; Means of Business Communication; Communication for Knowledge Management; and, Employment Communication for Career Advancement. Each of these parts attempts to give conceptual as well as functional clarity on various areas of business communication.

Each chapter in the book is complemented by multiple live case studies along with crystal clear exhibits, tables, figures and illustrations. The case studies alone cumulate to about 40 cases spread across the book. Each chapter is also supplemented by the latest advancement in the communication technology and how real time business houses are leveraging them to stay ahead of their competitors thereby linking the readers not just to the subject but also the latest developments taking place every next day.

The pedagogical tools adopted in the book such as 'simulation based exercise' at the end of each chapter, the 'ethics based questions' along with the exercises and the 'experiential learning' features further adds value to the quality of content and presentation adopted in the book . Learning objectives at the beginning of each chapter, margin callouts, chapter-wise summary, endnotes and appendix along with the review and discussion questions, needless to mention further adds on the utility factor and 'value for money' of this book.

To this end, the book, with the help of extensively researched content and application based pedagogical tools, presents a thorough analysis on how communication skills can become a strategic asset to build a successful managerial career on one hand and how organizations could leverage on their potentials by enhancing their communication skills to the fullest on the other.

Biographical Note of the Luminary in an Area of IS

Glenda Eoyang, Executive Director, Human Systems Dynamics Institute

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Dr. Glenda H. Eoyang, Ph.D., has deep insights into the art and science of self-organizing systems. As a pioneer in the field of human systems dynamics, Eoyang applies principles of self-organizing to help people thrive in unpredictable environments. Since 1988, she has provided training, consulting, coaching, and facilitation support in both the public and private sectors. As the founder of the field of human systems dynamics, she brings a strong and cogent voice to public discussions about the field.

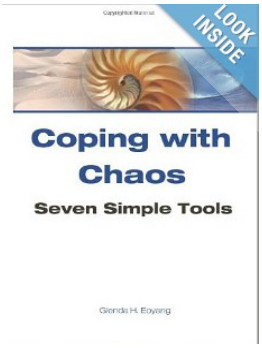
She currently serves as founding Executive Director of the Human Systems Dynamics Institute, a network of professionals working at the intersection of complexity and social sciences. A master teacher and facilitator, Dr. Eoyang supports change for individuals, organizations, and communities around the world. Her experiences as guide, leader, entrepreneur, author, and public speaker provide a wealth of resources.

Dr. Eoyang has trained and certified more than 300 member associates who form a world-wide, scale-free network of scholar practitioners. She consults and trains others to improve performance in leadership and management, planning, product development, organization and personal development, customer service, and conflict transformation. The accessibility of her work can be found through her public webinar series, making HSD principles and practices accessible around the world.

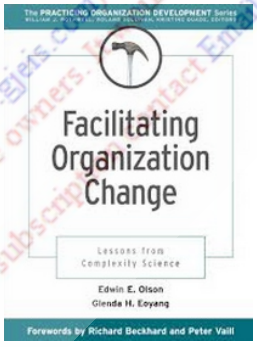
Dr. Eoyang works tirelessly to expand the field and application of Human Systems Dynamics. With an incisive, analytical mind, she has a deep understanding of the scientific and mathematical theories that provide the grounding for Human Systems Dynamics, and yet she is able to relate to individuals and groups in powerful and personal ways.

Across all areas of her life, she remains in a stance of inquiry, always open to new learning and exploration. It is this major characteristic that fuels her work at HSD Institute. Her vision as a researcher and entrepreneur, her knowledge and skill, and her insights and talents are generously shared with those who come into her world, and she is unselfish in her sharing of ideas and tools. In addition, the field of research continues to evolve such that new models and applications emerge in the exchange of information. Glenda builds this body of knowledge through the Institute to enable others in specific fields to find real applications to their world.

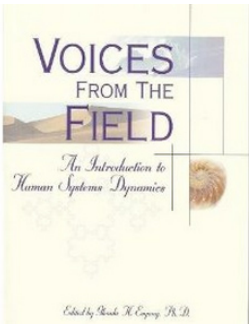
Her published works include numerous scholarly and practical articles in academic and practitioner journals, books, chapters, presentations, blogs, and reflective essays. She has authored three books:



Coping with Chaos: Seven Simple Tools an accessible and useful treatment of patterns of complexity for first line managers and supervisors.



Facilitating Organization Change: Lessons from Complexity Science a ground-breaking book with Dr. Ed Olson that is currently being used as a text book in organizational development programs across U.S.



An Introduction to Human Systems Dynamics, an edited collection of practitioner stories that demonstrates the transformative power of systems dynamics.

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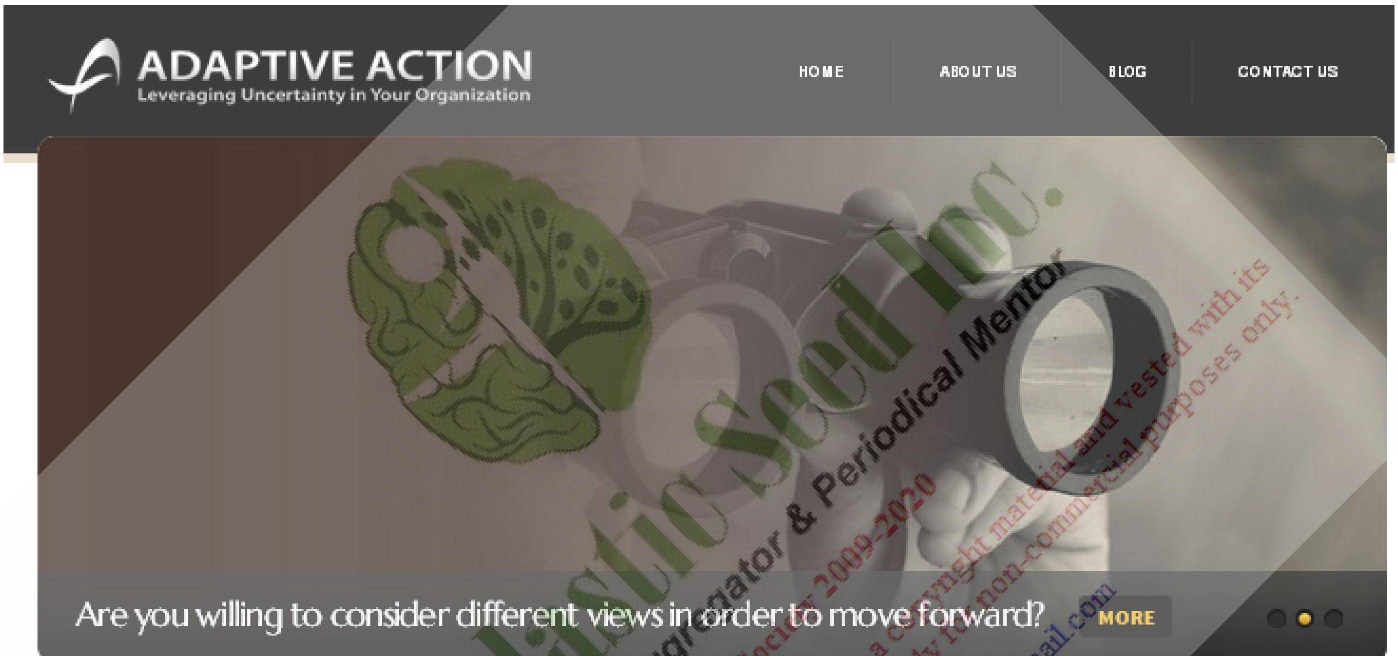
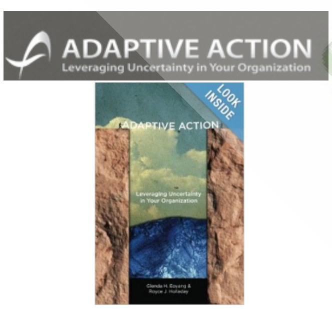
Great Enterprise Contribution to Society in Information System Perspectives

Adaptive Action is a Three-step Planning Process http://www.adaptiveaction.org

Adaptive Action is a three-step planning process developed by Glenda Eoyang and Royce Holladay through their work at the Human Systems Dynamics Institute.





Rooted in the study of chaos and complexity, *Adaptive Action* introduces a simple, common sense process that will guide you and your organization into reflective action. This elegant method prompts readers to engage with three deceptively simple questions: What? So what? Now what? The first leads to careful observation. The second invites you to thoughtfully consider options and implications. The third ignites effective action. Together, these questions and the tools that support them produce a dynamic and creative dance with uncertainty. The road-tested steps of adaptive action can be used to devise solutions and improve performance across multiple challenges, and they have proven to be scalable from individuals to work groups, from organizations to communities. In addition to laying out the adaptive action framework and clear protocols to support it, Glenda H. Eoyang and Royce J. Holladay introduce best practices from exemplary professionals who have used adaptive action to meet personal, professional, and political challenges in leadership, consulting, Alzheimer's treatment, evaluation, education reform, political advocacy, and cultural engagement—readying readers to employ this new toolkit to meet their own goals with a sense of ingenuity and flexibility.

In their book, *Adaptive Action: Leveraging Uncertainty in Your Organization*, Eoyang and Holladay provide a deeper understanding of the Adaptive Action framework and clear protocols to support it. The book includes nine case studies from professionals who used Adaptive Action to meet personal, professional and political challenges. HSD Associates addressed many "sticky issues," including leadership, consulting relationships, Alzheimer's treatment, systems evaluation, education reform, political advocacy, and cultural engagement.

Glenda H. Eoyang Glenda discovered the roots of complexity in human systems and gives them away every day. Her research revealed the underlying dynamics of chaos, and her practice invented models to explain it and methods to influence it. In 1986, Glenda began to use these principles herself and to help others use them, too. In 2000, she named this field of study and action as Human Systems Dynamics (HSD). She consults, facilitates, coaches, and teaches in public and private organizations around the world.

Royce J. Holladay Royce is a master scholar practitioner. She brings her profound insights to life in her writings, coaching relationships, and teaching/learning engagements. She began her professional life in schools, where she transformed people and institutions. Today, she uses human systems dynamics to help others build their capacity to transform themselves, their colleagues, and the communities they serve.

Great Enterprise Contribution to Society in Information System Perspectives

Knowledge Resource Development & Welfare Group (KRD&WG)

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Knowledge Resource Development & Welfare Group (KRD&WG) is a nonprofit, social benefit organization operating at the national level. KRD&WG is committed to inclusive and holistic integration and development of the Knowledge Resource of the country. We strive to bring Quality paradigm at the centre stage of Human Capital Development through quality audits, felicitations, seminars & workshops, training, consultancy, advocacy and collaborative engagements. Our aim is to promote sustainable and inclusive economic growth and social development through effective management of Human Capital.

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Dr. Naresh Gill

Vision and Mission of KRDWG

1. Quality Initiative Mission

Under the Quality Initiative Mission, KRDWG organizes seminars, conferences, workshops etc. on various aspects of Human Capital and its linkage with inclusive growth and sustainable society. KRDWG has also instituted excellence Awards under various categories so as to bring forward and encourage individuals, teams and organisations contributing significantly to socio-economic development of mankind.

2. Research & Publication

KRD&WG research areas primarily include developmental concerns of national knowledge resource and quality of life in rural India. KRD&WG is in the process of conducting the following studies:

- Quality assurance for inclusive and holistic education in primary, secondary, senior secondary and vocational schools of India.
- What do the students expect from today's education?
- What do the students think is a better evaluation system and why: Continuous and Comprehensive Evaluation (CCE) or Terminal Examination System (Earlier Pattern).
- A nationwide e-study on quality of work life in Indian organized sector.
- Life style of School going children of marginal farmers in NCR region.

Findings of the studies will be shared with all the stakeholders through our media partners and will also be uploaded on KRD&WG website.

3. Training & Consultancy

Capitalizing on its core competence KRD&WG plans to conduct workshops on various aspects of education and rural development. Primary objective of these workshops in education sector is to help the stakeholders to relate quality education with the Quality of life. Workshops designed for rural sector focus on developing capabilities for income generation and economic independence. We have a very rich resource pool to contribute multifaceted inputs on the focal themes of these workshops.

4. Rural Development

KRD&WG with active support from its panel of experts in terms of academic input and in association with member societies organizes workshops, awareness campaigns, skill up gradation training, health camps etc. in villages.

India Green Business Awards 2014
KRDWG in association with Applied NanoStructures, Inc., USA announces India Green Business Awards 2013.

- Private Sector (Large, Medium, Small Scale, Micro industrial/Service Sector Enterprises).
- Government/Public sector entities.
- Municipalities, Public utility Services and NGOs.
- Media, Journalists, bloggers.
- University Students Project Teams/Student Councils.

Nominations are also invited from individuals for the Green Award in individual category.

Great Enterprise Contribution to Society in Information System Perspectives

NGOportal: A Comprehensive Knowledgebase for NGO's

Suresh Pakki

Executive Director

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Web URL: http://www.ngoportal.org

Executive Director and founder of the ngoportal.org (NGOportal Trust–registered name) has been in the NGO field for more than 25 years working with Internal NGO/Funding Agencies like OXFAM (GB), SAVE THE CHILDREN (UK), HIV/AIDS ALLIANCE, UNDP, INTERACT WORLD WIDE, CONCERN WORLDWIDE. During his association with these organizations, technical support in Finance, Grants, Admin, HR, Project Management, Organisational Development for more than 100 NGOs were provided. He has worked for Relief and Rehab programmes and has also worked in India and Sri Lanka.

www.ngoportal.org is a top ranking NGO Management site, providing information to NGOs in India and other countries. This website was started in 2008 with an aim to help NGOs in providing information such as NGO funding, NGO database, NGO jobs, Finance, HR, Admin and Grants management. In addition information related to NGO jobs and news was also shared. At the moment there are about 4000 plus registered NGOs and another 4000 non-registered NGOs and individuals who are interested in NGO activities. (http://www.ngoportal.org/ngo_database.html)

The site is accessed in more than 200 countries with a prime focus on India. NGOportal is also enlisted in the top 10 International NGO database related sites by EU Citizens House http://citizenhouse.eu/index.php?option=com_content&view=article&id=192%3Ainternational-databases&catid=46%3Adatabase&Itemid=162&lang=en. Since its inception, this site is run personally by the Executive Director without support from any donors or members. We are in the look outs for some organizations or individuals who can support our efforts to help not–for–profit organizations across the globe.

Great Enterprise Contribution to Society in Information System Perspectives

Peepal Consulting-domain Specialized Executive Search Firms

Peepal
Domain Specialized Executive Search Experts

Vijay Kumar
Managing Director & CEO
Website – www.peepalconsulting.com

About Peepal Consulting

Peepal Consulting is a group of domain specialized Executive Search firms; most of them being a pioneer in their own space.

Since its inception, Peepal with its domain expertise, focused insight, and innovation has gained a reputation of a dedicated and premium Executive Search group, enabling us to attain a leading position in the industry.

We are also a member of Industry's Leading body, Executive Recruiters Association, for past 8 years.

The Idea, "I do everything", is history. The new business Idea is, "I do only one thing, but really really well!" One of the founding pillars at Peepal is, "Focus". We have always believed business value is generated with dedication, determination and attention to detail. **Our approach to Executive Search is that we have to be experts in the domain where we are helping the clients**. Every subsidiary at Peepal works with a dedicated team of employees engaged only in the specific domain, increasing our understanding, reach and relationships.

Key Specialization Areas (Subsidiaries)

To help solve talent acquisition pain points of our clients, we have chosen to work in some of the most niche and challenging fields of business. Here are our current specialization areas:

ProductPeepal–IT & Product Engineering
AnalyticsPeepal–Analytics
QuantPeepal–Quant
R&DPeepal–R&DPeepal

About The Managing Director & CEO

Vijay Kumar comes from a techno-managerial background, having done B.Tech in Computer Science and MBA from Indian Institute of Science, Bangalore (India). He worked with Infosys Technologies Limited, India (NASDAQ:INFY) as a Technical

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Architect in Thought Leadership team and collectively managed one of the largest and most admired Knowledge Management system implementations across the globe. He also had a stint with world's largest hedge fund, D.E. Shaw group, and played an active role in working with the systems which had got firm the name of being "the most intriguing and mysterious force on Wall Street" by Fortune. An avid risk taker, Vijay founded Peepal in 2005 to follow his entrepreneurial instincts and build an organization which will be based on principles of integrity and transparency, professionally driven, and has concern for all stakeholders.

Great Enterprise Contribution to Society in Information System Perspectives

KNOEMA-A Knowledge Platform

Vladimir Bougay

Co-Founder and CTO
http://knoema.com

About Knoema

Knoema is a knowledge platform. The basic idea is to connect data with analytical and presentation tools. As a result, we end with one uniformed platform for users to access, present and share data-driven content. Within Knoema, we capture most aspects of a typical data use cycle: accessing data from multiple sources, bringing relevant indicators into a common space, visualizing figures, applying analytical functions, creating a set of dashboards, and presenting the outcome.. Thus knoema can be considered as the largest open and public data repository with 150 M+ time series and 3000+ datasets covering different socioeconomic topics. Knoema is aimed at a wide audience like data experts, data enthusiasts, students, educators, analysts, researchers, journalists, consultants, business practitioners, academics, librarians and many others. Vladimir Eskin and Vladimir Bougay are the co-founder of Knoema.

Knoema designs, develops and implements several types of solutions for client's use	
Corporate Data Room	For analytical and marketing departments of corporations and organizations *Know your industry and grow your business intelligently with Corporate Data Room.* With the access to a wide range of global data, it lets you choose the required sector analytics and upload your corporate data to perform high-grade analysis on market tendencies and forecast your business development. Being fully integrated with corporate site design, it turns to be your exclusive custom data portal.
Open Data Portal	Examplesopendataforafrica.orgopendata.perm.ru For public institutions, national agencies, NGOs *Easily implement your own open data program.. Our ready-to-use Open Data Portal is an ideal solution that demands of minimum labor and time costs.* It doesn't matter how much data you have to open to the public – Open Data Portal will present it in the most digestible and handy way. Open Data Portal is your unmatched tool in building transparency, innovation and literacy around data and engaging with public community - all in one place.

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Campus Data Network	For universities, schools and other educational institutions *Campus Data Network is all about adding new technologies in education.* First of all, it is the ultimate resource of world statistical data compiled to meet the exact subject or the course. Interconnecting teachers and students, Campus Data Network also supports field working process with data analysis and data visualization which provides simple communication for both parties Example: hawaii.knoema.com
Research Delivery Service	For independent consulters and consulting companies *Boost your consulting practice and stream of customers with Research Delivery Service.* Research Delivery Service is a new unique tool for consulters that are built as a client engagement and delivery service. The core benefit of it lies in bringing more value for customers, as a result bringing their loyalty and your business development.

G. Ram Reddy Social Scientist Awardee 2013-Sanjay Mishra

Dr. Sanjay Mishra, Director of the Commonwealth Educational Media Centre for Asia, received the second - Professor G. Ram Reddy Social Scientist Award for the year 2013. The award had been given to Dr. Mishra on December 17th, 2013 at the STML building, Dr. B. R. Ambedkar Open University campus in Jubilee Hills, Hyderabad. According to a press release by the G. Ram Reddy Memorial Trust, Dr. Mishra had delivered an introductory lecture on 'Learning and Technology', prior to an award ceremony. The Professor G. Ram Reddy Memorial Trust conferred the award in recognition of Dr. Mishra's contributions to open and distance learning, particularly for promoting the use of technology in education. The Award is given in the memory of Professor Reddy, the father of Distance Education in India, first Vice President of COL and the first Vice Chancellor of Dr. BRAOU and Indira Gandhi National Open University, New Delhi, India.

2nd Professor G. Ram Reddy Social Scientist Award for the year 2013 to Dr. Sanjay Mishra.

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Dr. Sanjay Mishra joined COL as Director of the Commonwealth Educational Media Centre for Asia (CEMCA) on 1st July 2012. Dr. Mishra is a leading scholar in open, distance and online Learning in Asia. Most recently, he was Programme Specialist (ICT in Education, Science and Culture) at UNESCO, Paris. Dr. Mishra has over 18 years of experience in design, development and management of Open and Distance Learning Programmes. With a blend of academic and professional qualifications in library and information science, distance education, television production and training and development, he has been promoting the use of educational multimedia, eLearning and use of open educational resources (OER) and open access to scientific information around the world and, in particular, Asia. During his service in different capacities at the Indira Gandhi National Open University (IGNOU), amongst many innovative activities and programmes, he developed the successful OER-based one-year Post-Graduate Diploma in eLearning. As a staff developer and trainer, Dr. Mishra has received the ISTD-Vivekanand National Award for Excellence in Human Resource Development and Training in 2007, and has facilitated over 100 training sessions in over 12 countries. He has contributed over 200 publications as books, chapters, journal papers, conference presentations, book reviews and distance learning materials. Most recently, at UNESCO, he facilitated the adoption of open access to scientific information and research. Dr. Mishra has also previously served as Assistant Regional Director of one of IGNOU's Regional Centres and as a Programme Officer at CEMCA (2001–2003).

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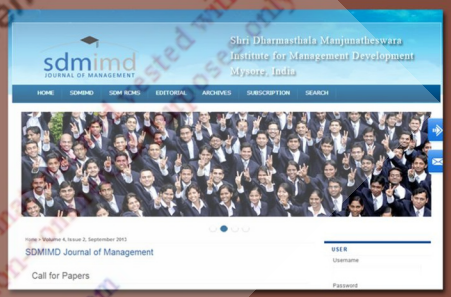

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