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Message from Editor's Desk

Dear Readers,

We are presenting in a new avatar a journal called GJEIS having it's niche in EIS. Our goal is to create a new forum for exchange of information on all aspects of Computing, Enterprise, Information and Systems.

The growth and creditability of any journal depends on its impact factor. It's really great news that GJEIS has got an **Impact factor of 0.9166**. We once again throw a light and recall you that GJEIS is an Inter Referred Journal which takes into consideration Blind and Peer Review process. The USP of the Journal is it's inclination towards **Enterprise Information System and Free and Open access**. The journal had massive hits, which impact we can see through various Social Networking sites available online at the right side of an URL www.gjeis.org.

I once again appreciative for your support and endeavor to furnish GJEIS to enormous height and broaden into information based archive in order to promote academia and industry in entirety.

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I wish to see GJEIS develop into a computing journal with the balance changing toward research communication rather than remain a bulletin. All this can be accomplished from end to end continuous pointer from our readers. So, please, do not shilly-shally to get in touch with me with your annotations, criticism and acquiescence. They will positively horizontal the movement of us in making these dealings progressively well-designed and attention-grabbing.

Dr. Subodh Kesharwani,

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Global Journal of Enterprise Information System

A Non-Statistical Approach to Predict Crude Oil Prices

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Abstract

Oil is one of the important commodities that contribute highly to the advancement of human civilization. Predicting oil prices is one the challenging yet important thing that can affect the short and long term planning for countries as well as various sectors in industry. Most of the attempts to predict oil prices depend on the previous data analysis and evaluation with statistical approach. This paper proposes a non-statistical approach to predict oil prices.

Keywords: crude oil, data fitting, gross domestic production

1. Introduction

Almost all of the civilized world machinery depends on oil as a source of energy. Oil can provide a huge amount of energy yet it cost less compared with other energy sources. Predicting oil prices attracted too much attention in the recent years due to the huge affect of the oil prices on human life. Prediction attempts and approaches for oil prices can be summaries in to three kinds:

- Long term: Long term predictions are an important part in planning the future of countries especially the ones that produce oil.
- Short term (monthly): Stock brokers are interested in short term prediction for oil prices.
- Seasonally prediction: Future contract are dependent on the midterm predictions.

This paper is interested in the seasonally prediction that is important to crude oil future contracts.

The use of statistical approach is so common to predict oil prices the work of (Andreou, Ghysels, & Kourtellos, 2011; Baumeister, & Kilian, 2012; Clark, & McCracken, 2009; Croushore, 2011; Hamilton, 2009) and many other attempts to predict oil prices is an example of using statistical approach to predict oil prices (either by fitting or using statistical methods). This paper develops a non-statistical algorithm to predict oil prices.

1.1 Seasonally Prediction and Data Fitting for Oil Prices

This section investigates the data fitting approach to predict the midterm oil prices. The oil prices compared to the total supply and demand around the world. In addition the gross domestic production (GDP) for the industrial countries is also taken in account.

Table 1 provides the results of applying the 'polynomial surface' (Fang, Li, & Sudjianto, 2005) fitting tool on 2011 data.

The obtained results are not accurate as it can be seen in table 1. Data fitting can be helpful in giving some ideas about the behavior of certain data but can be a huge failure in providing an accurate prediction. The 2D (figure 1–3) and 3D (figure 4–6) fitting graphs can be found.

Table 1: 2011 Prediction using surface fitting

Parameters	Quarters/Annual	Values	Predicted Oil Price ($/barrel)
Demand (million barrels per day)	Quarter 1	87.5	166
	Quarter 2	86.4	−140
	Quarter 3	88.4	65
	Quarter 4	88.8	110
Supply (million barrels per day)	Quarter 1	83.92	137
	Quarter 2	86.5	74
	Quarter 3	87.4	60
	Quarter 4	88.5	120
Global GDP (%)	Annual	4.23	50

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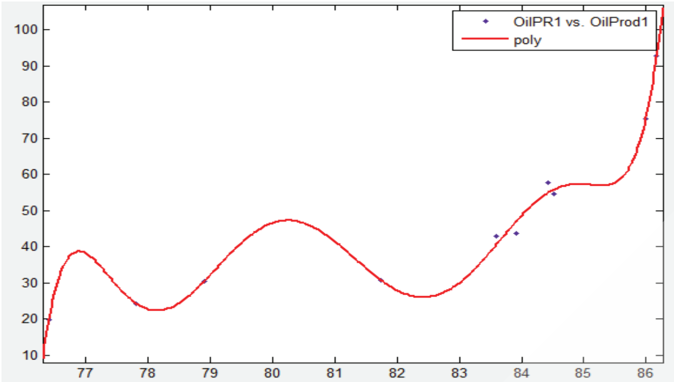

Figure 1. The supply and oil prices polynomial curve fitting of the years' first quarter.

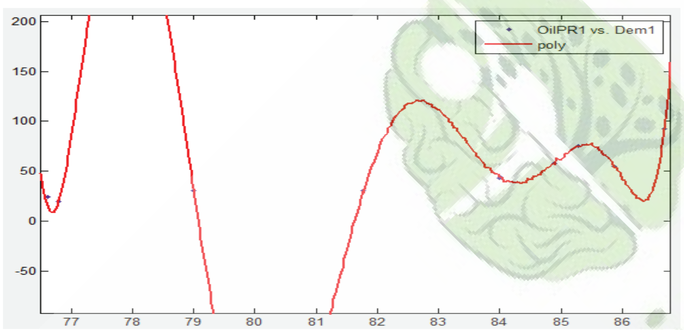

Figure 2: The demand and oil prices surface fitting of each year's first quarter.

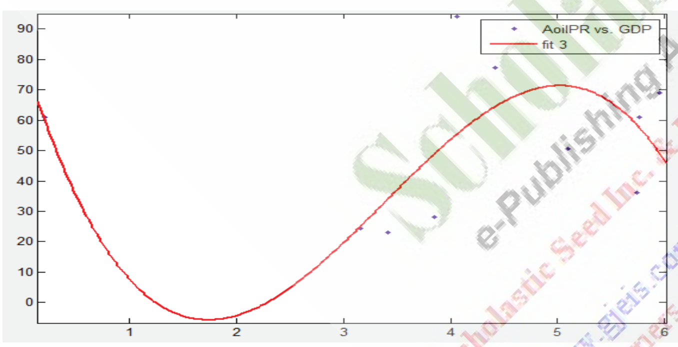

Figure 3: The annual GDP and oil prices polynomial curve fitting of the years' first quarter.

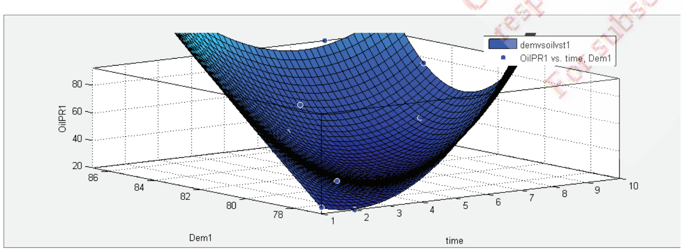

Figure 4: The demand and oil prices surface fitting of each year.

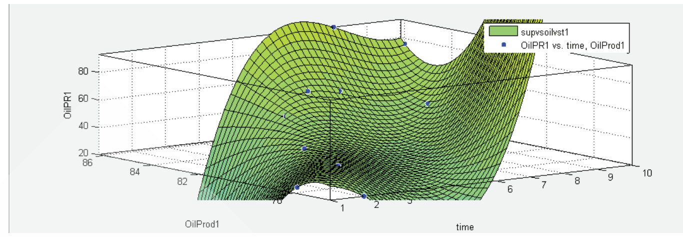

Figure 5: The supply and oil prices surface fitting of each year.

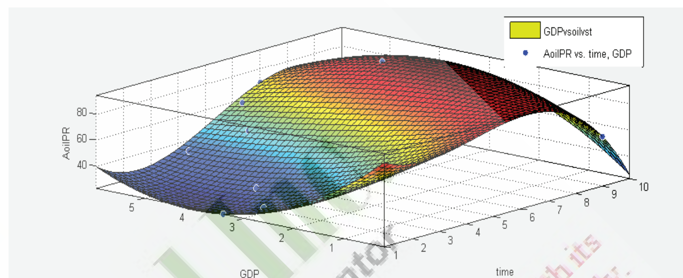

Figure 6: The annual GDP and oil prices surface fitting of each year.

1.2 The Economy and Oil Prediction

The previous section showed that data fitting can be far from accurate when predicting oil prices for the midterm range. Investigating other approaches, the GDP could be an important factor that affects the prices of oil.

Considering the oil as any other commodity in the world could be a huge mistake. In fact, oil is more than a normal commodity that can be predicted by merely fitting its previous prices. One may conclude that the importance of oil prices in human life forced oil producing countries as well as the industrial countries to maintain a steady increasing or decreasing in the prices. Hence, the approach of predicting oil prices using the gross domestic production (GDP) can be a valid approach.

This paper consider the GDP for the group of eight includes most of the world's advanced countries, which are Canada, France, Germany, Italy, Japan, Russia, United Kingdom and United States of America also China GDP is considered due to the rapid growth in the Chinese economy.

The next factor to be considered is of the currency nature. However, to include numerous currencies in oil prediction analysis seemed to be impractical and time wasting. A factor must be sought that combine some of the most influential currencies known around the world, hence the U.S. Dollar Index (USDX) was chosen for such presentation. This factor is a measurement of the value of the U.S. dollar relative to the basket of foreign currencies, which included the Euro, the Japanese yen, Pound sterling, Canadian dollar, Swedish krona and the Swiss

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franc. This index included such currencies in a different weight for each currency. The U.S. Dollar Index holds a 57.6% weight of the Euro currency, a 13.6% weight of the yen, a 11.9% weight of the Pound sterling, a 9.1% weight of the Canadian dollar, a 4.2% weight of the Swedish krona and a 3.6% weight of the Swiss franc. This factor is a good indication of economy of some of the world's most developed countries. This will help in determining how this will relate with future data relation with the oil price.

1.3 An Approach to Oil Price Prediction and Analysis

The purpose of this research is to find a non-statistical approach to confine the oil price within a reasonable range in future years to better understand and anticipate global economy… The analysis is done by backtracking a yearly average of the data to produce a range of oil for the years 2006–2012 as means of testing the accuracy.

The prediction approach can be summarized as follows:

2. Prediction Algorithm

(Note that P_o is the oil price of the previous year, P_u is the upper limit of the oil price interval, P_L is the lower limit of the oil price interval, GDP_o is the GDP of the previous year, GDP_u is the GDP of the upper limit of the oil price interval, GDP_L is the GDP of the lower limit of the oil price interval and USD_o is the US dollar value of the previous year, USD_u is the US dollar value of the upper limit of the oil price interval, USD_L is the US dollar value of the lower limit of the oil price interval.)

1. With the value of P_o, evaluate $P_u = 2P_o$ and $P_L = 0.5P_o$.
2. For P_u and P_L, compare if the prices dropped at the same ratio previously in a period of 1 or 2 years. If not, go to step 6.
3. Compare the changes in ratios between P_o and P_u in order to get GDP_u and USD_u from the years the ratio is consisted of from the data.
4. With the value of GDP_o, compare the change in the ratios of GDP to generate the ratio between GDP_o and GDP_u. With the value of GDP_o, compare the change in the ratios of USD to generate the ratio between USD_o and USD_u.
5. If the change in ratio occurred previously within 1 or 2 years, then assign $x=P_u$ as the upper limit of the oil price and head to step 7. Otherwise, go to step 6.
6. Update the value of P_u to be $P_u = 2P_o - 5$ and repeat from step 2.
7. Conduct the steps from 2 to 5 for P_L.
8. If the change in ratio occurred previously within 1 or 2 years, then assign $y = P_L$ as the lower limit of the oil price. Otherwise, head to step 9.
9. Update the value of P_L to be $P_L = 0.5P_o + 5$ and go to step 3.
10. $z = \frac{x+y}{2}$.

2.1 Computational Results

The analysis is conducted by using the programming software (MatLab). The data for the GDP are from reference (Pesaran, & Timmermann, 2009) and the oil prices data are from reference (econdlink). Table 2 provides the results obtained by the prediction algorithm.

3. Conclusion

The results obtained by the prediction algorithm are better than the regression results. However, the prediction algorithm still not very accurate as it can be seen clearly in table 2. The prediction algorithm fails to predict the rapid increase in oil prices that occur in 2008 or the rapid decrease that occur in 2009. This suggests that other factors should be taken in consideration. The effect of other natural resources, other economical factors and the size of the oil future contracts should be considered in any future work.

Table 2: Yearly prediction intervals of oil prices

Year	Limits	Oil Price ($/barrel)	Average	Actual price ($/barrel)	Accuracy percentage
2003	Upper	27	25	28	10.7%
	Lower	23			
2004	Upper	36	31.5	36	12.5 %
	Lower	27			
2005	Upper	42	38.5	50	23%
	Lower	35			
2006	Upper	58	53	58	8.6%
	Lower	48			
2007	Upper	66	60.5	69	12.3 %
	Lower	58			
2008	Upper	73	69.5	94	26%
	Lower	66			
2009	Upper	94	92	61	33.6%
	Lower	89			
2010	Upper	103	94	77	18%
	Lower	85			
2011	Upper	85	81	107	24.2%
	Lower	77			
2012	Upper	132	116.5	109	6.4%
	Lower	101			
2013	Upper	110	100.5	NA	NA
	Lower	91			

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E-Commerce: A Mechanism to Ensure the Pre-Purchase Decision Security of the Online Customers

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Abstract

Why e-Commerce in the retailing of goods is not coming up with the rapidity as it was expected in its early days? The risks associated with post-purchase decision are major reason to keep the customers away from e-commerce retailing. The e-commerce vendors are continuously implementing the stronger technologies to overcome from the risks associated with post-purchase decision process by the help of researchers and technocrats. The major emphasis of the researchers is on secure transactions, the server side security, and the client side security. The post-purchase decision process and after market security were always interesting and challenging topics of research. Though, the vulnerability is not finitely measured quantity over the public network but the secure transactions over the public network, the security of client and server is becoming stronger by the continuous valuable contribution of the researchers of the area. In spite of the technology advancement and new researches a huge scope is still left in the area of security of e-Commerce. Among the various reasons of customer satisfaction and security one important reason is pre-purchase decision security associated with the selection of e-shop by the customer. This paper tries to identify the risks associated with the pre-purchase decision and its solution. The paper also suggests the design and implementation of technology to provide the pre-purchase decision security.

Keywords: e-commerce, e-retail, trust, authenticity, linking, web access control

1. Introduction

According to the records the world's first B2B type e-Commerce was used by Thomson Holidays in 1981, the first B2C was Gateshead SIS/Tesco in 1984, and the world's first online shopper was Mrs Jane Snowball of Gateshead, England. The concept was introduced by Michael Aldrich in 1979, UK. The revolution began during 1990s when the concept of ERP (Enterprise Resource Planning), Data Minning, and Data Warehousing were incorporated with the e-Commerce. By the end of 2000 many renowned American and European business organizations started providing their services and product through internet and World Wide Web. By this time the people had become aware of e-Commerce and became familiar to purchase the goods and to make the payment online through secure Internet Connections/Protocols.

It was expected that the retailing in e-Commerce or e-Retail or e-Tail would grow rapidly (Evans & Wurster, 2000). The strengths of e-Retail are low search cost, efficiency, competency, and no intermediary. Although, e-Commerce is growing at an exponential rate (Khan, Varshney, & Qadeer, 2011) but e-Retail is having a very small market share. The share of e-Retail is 3–4% in the total retail industry and more than 95% share is with mortar and bricks sales.

The Internet provides a number of advantages and challenges to online retailers (Laudon & Traver, 2008). There could be many challenges in the growth of e-commerce retailing industry. These challenges can be categorized as illustrated in figure 1.

In this paper the key discussion topic is the pre-purchase decision challenges. When a person is willing to go for online shopping then the first step is selecting an appropriate e-shop. Now, the question arises how the customer will verify the authenticity of the e-shop because misrepresenting or spoofing (Laudon & Traver, 2008) is easier on the Internet. Spoofing can be done by cyberpiracy, and linking. The different types of spoofing are explained in figure 2.

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Category	Description	Category Example
Pre-Purchase Decision	It is about selecting a web shop before placing a purchase order with originality confidence.	Authenticity Subcategories: Cyberpiracy, Linking
Post-Purchase Decision	It is about maintaining secure e-transactions starting from purchase order placing to the delivery of purchased goods.	Confidentiality, Privacy, Service-Level
After Market	It is about maintaining the security of information and data used during e-transaction.	Weblining (Laudon & Traver, 2008)

Figure 1. The categories of security threats in e-commerce retailing.

Category	Definition	Occurrence Examples
Cyberpiracy	It is the practice of registering domain names similar or identical to trademarks of others to divert web traffic to their own sites.	Ford Motor Co. v. Lapertosa, 2001 , Audi AG and Volkswagen of America Inc. v. Bob D'Amato, 2006, Lufthansa v. Future Media Architects, 2008, Nissan Motors v. Mr. Uzi Nissan, 2008 and Neeley v. Name Media Inc, 2009.
Linking	This is practice of linking from a web site to the content of other web site, by passing the home page.	Shetland Times v. Shetland News, 1996, Intellectual Reserve v. Utah Lighthouse Ministry, 1999, Ticketmaster v. Tickets.com, 2000.

Figure 2. The types of spoofing and the major occurrences.

The customer does not have any specific software technology to check the authenticity of the e-shop so, the customer feel insecure. Security has a positive influence on trust (Ivan K.W. Lai, et al. 2011). Trust (Jarvenpaa, Tractinsky, Saarinen, & Vitale, 1999; Gefen, 2000; Gefen & Straub, 2000; Pavlou & Chellappa, 2001; Koufaris & Hampton-Sosa, 2002) is a major factor to satisfy the online customer. Trust building with the customer has many sectors in the e-Retailing. The threshold of this trust can be set as the authenticity of the e-shop website.

How much the pre-purchase decision is affecting the customers? Is this phase so important that it is creating distrust in the customers? According to the report published by Internet Crime Control in the year 2008, 2009, and 2010 the top most registered complaint was of non-delivery of purchased goods (IC3, 2012). What could be the major reason of non-delivery of the products? The main reason of this fraud is spoofing e-shops. This is one of the major concerns in e-Retailing.

2. Defining the Problem

"To provide a technological web service (W3C, 2004) to the customer at the client side by which the customer can check the authenticity of the e-shop in the domain of e-shop itself". The customer is not needed to install additional software for the purpose as the solution is in the form of web service.

3. Designing the Solution

The solution needs a trusted third party involvement and the technique of encryption. I would like to coin a term Web Access Control (WAC) at this point. My WAC is unique serial number associated with the web address of a web site. This WAC should be prearranged from a third party with uploading of a web site so that no two web sites share the same number.

The third party will be controlling and monitoring the entire World Wide Web running on the Internet at the authenticity level. WAC will work as identification number for each website. The customer willing to check the authenticity of an e-shop will simply send a request to the third party. The third party will take the query from the customer and will return the associated result after processing the query. The query will have the encrypted WAC address of the web site about which the customer wants to enquire. The whole process can be performed as follows:

3.1 Customer Actions (CA)

CA 1. *The customer opens a website*

CA 2. *Requests for the WAC of the website in the website itself, available as a web service. A number will be returned to the customer. This number is an encrypted WAC (EnWAC). EnWAC is the exclusive encryption of the WAC of the website and a systematically generated integer.*

CA 3. *The customer takes this EnWAC and sends it to the third party as a query.*

3.2 Trusted Third Party Actions (TA)

TA 1. *Generating the WAC for each website uploaded or to be uploaded.*

TA 2. *Creating and maintaining a database for the websites.*

TA 3. *Providing a website to the people for active interaction and query processing.*

3.2.1 TA 1

To generate WAC for n websites; consider a prime integer 'a' and define U_a the set of positive integers relatively prime to a. Therefore, the number of elements in U_a is exactly $(a-1)$. U_a defines a cyclic group (Herstein, 1993) under multiplication modulo a.

Extension of Ua: Now, define $U_a^m = U_a \times U_a \times \ldots\ldots \times U_a$, ($m$ times, where m>n) as follows;

$$\forall (x_1, x_2, \ldots, x_n) \,\&\, (y_1, y_2, \ldots, y_n) \in U_a^m, (x_1, x_2, \ldots, x_n) * (y_1, y_2, \ldots, y_n) = (x_1 * y_1, x_2 * y_2, \ldots, x_n * y_n)$$

So that U_a^m defines a group.

Generating WAC: Select a sufficiently small prime integer 'b' and define U_b to form a group. Extend U_b to U_b^n by the above mentioned method. A one-to-one mapping $t: U_b^n \to U_a^m$ gives the EnWAC. $t(u_b^n) = u_a^m \in U_a^m$ is the code visible to the userv and $u_b^n \in U_b^n$ is the private code of the website.

Decoding: Define an onto function $r: U_a^m \to U_b^n$ such that $r(u_a^m) = u_b^n$ that is $r(t(u_b^n)) = u_b^n$ which is a sufficient method to decode the EnWAC.

Corollary: If the result holds good for $r: U_a^m \to U_b^n$ then it holds for $r: U_a^{m+1} \to U_b^{n+1}$ also, $\forall m, n \in Z^+$.

With the help of the corollary m, n can be increased into infinitely large numbers to create WAC for an infinite number of websites.

Performance Analysis:

Uniqueness: $\forall, u_a^m = (x_1, x_2, \ldots x_n) \in U_a^m$ is unique. Let us suppose, two distinct elements $u_a^m, v_a^m \in U_a^m \ni u_a^m = v_a^m$ Therefore, $u_a^m * (v_a^m)^{-1} = 1_{U_a^m}$(identity) but $u_a^m * (u_a^m)^{-1} = 1_{U_a^m}$ So, u_a^m has two inverses which is not possible in a group. Hence, $u_a^m \neq v_a^m$

Secure: Since both ‘*a*’ and ‘*b*’ remains private so only a brute force method can be used to find out ‘*a*’ and ‘*b*’. The time taken is sufficiently large to lose the interest even on the fastest available computer processor.

Running Time: The entire calculations can be performed in a polynomial time.

3.2.2 TA 2

In this component, indexing method can be considered a suitable method to maintain the database. An index file can be created upon two fields EnWAC and WAC. The datbase file containing the entire information is kept separate. A one-to-one mapping in between index file and database file will be used for the efficient data storage and data processing. Indexing is justified, as the huge number of data is required to be maintained. A typical index file and database file is described using figure 3.

(DName: Domain Name, OrgName: The name of website owning organization, OrgAdd: The address of the organization, OrgFunc: The area of functioning of the organization)

The index file is sorted on EnWAC and the database file is sorted on WAC to reduce the total searching time.

3.2.2 TA 3

A dedicated website of the trusted third party is needed to provide an interface to the customer to check the validity. After reading the EnWAC the customer will open the website and submit EnWAC as query. In the server side activity the EnWAC supplied by the user will be matched with the EnWAC in the indexing file. If found the index file mapping will return the result from the database file. Otherwise, an error message will be displayed.

4. Linking Prevention

Now, linking prevention is an easy task with the use of WAC by introducing an additional element in the URL connecting function. For example, if HTML is used for the website creation language then anchor element (Morrison, 2001) creates a link with another page. The sample linking in HTML can be of the form <***a href*** **=”http://www.example.com”**> where, ***href*** is an anchor attribute and short form of hypertext reference. The anchor tag has many attributes like, name and target etc. The tag is capable to link internal pages as well as external pages or the contents of pages. The <*a*> tag alone is not capable of doing anything. The external linking can be prevented just by introducing a mandatory attribute for incorporating WAC. If the linking reference is restricted upon the same WAC the external linking will not be possible.

In fact, this technique will prevent the mutually agreed union of two websites also. To overcome with this problem one more optional attribute to <*a*> for composition of WACs can be added. This composition will be upon the binary operation upon which the WAC is created. A WAC being a member of U_b^n the composition will also be a member of U_b^n not assigned to any other website and will have a valid tuple available in the database file. This tuple may be filled with the website union information or with the primary website information.

5. Conclusion

In this paper, I propose a mechanism to retain the authenticity of the websites with the help of a trusted third party. The entire mechanism is independent and secure. The mechanism is not only capable to check the authenticity but also provides an efficient method of linking prevention. The mechanism can be used

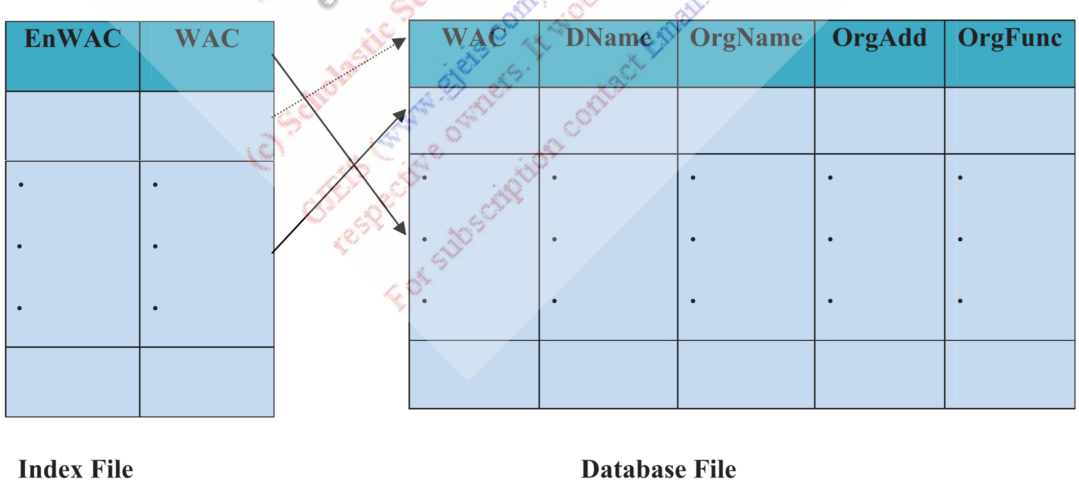

Figure 3. A typical database table design to store the website information.

in the pre-purchase security of the e-commerce retail. This will be an added advantage for the customers and a trust building factor in the pre-purchase decision.

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Global Journal of Enterprise Information System

A Study of Media Preferences and Leisure Time Management of Judges

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Abstract

Judicial system is one of the pillars of Indian democratic system so are the Judges, the important part of Indian society. This paper is based on the research work done on the district level judges and various media options available to them. Their preferences of media form for specific time of a working day and also how they include various media in their leisure time is studied to know media preferences of Judges. The study allows the researcher to understand the choices of judges among the various media options available, which form of media is used in which part of day, how much part of that media is read, listened or viewed and how much time media get in their leisure time. It appears from the study that newspaper is the most preferred media for the judges in the morning hour showing that information precedes over entertainment in early part of the day while choice of Television programs at night and late nigh show that entertainment precedes over information.

Keywords: judiciary, media, preferences, newspaper, radio, magazine

1. Introduction

To know about people media use and preferences is important for Sociologist, Psychologists, Media planners, Communication researchers, Market researchers and Advertisers. All of them have different approaches as their aim of study is different. The communication research approach will be helpful for media planners and advertisers. Regarding media consumption and preference we are assuming that the people them self are choosing media for their use and for that use and gratification approach of communication can be well chosen in the line to study the media preferences of judge at district level. The present study tries to know the media preferences of the judges of district level judiciary in India. As Conference of Court Public Information Officers (CCPIO) in media survey observed the judges on their change of attitude towards media due to the influx of modern media technology is still missing. For United State judicial community year wise comparative data is available for analyzing that how new media technologies influences social media and cultural. 'The 2011 Conference of Court Public Information Officers' courts survey and new media examines the judges' perceptions about new and social media in general, and the use of social media sites like twitter, myspace, facebook etc., how judges are using social and new media technologies, and other allied issues (CCPIO new media survey, 2011). This type of surveys on judges are lacking in India.

2. Importance of Study

The outcome of the media preference survey we will precisely know which media channels are the most optimal and effective for the communication with the judges. We can evaluate which information channels should be utilized and what type of communication is desirable to achieve particular goals where the judges are in the role of consumer. Media preference survey will provide answers on the following questions-Through which media sources do the judges gather information? Which particular channels do they prefer? When and how do they get information? With what frequency do judges obtain information from particular media source/channel? (http://act-gr.com/eng/index/page/62)

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2.1 Objectives

1. To study the media preferences of judges.
2. To study time preference for opting particular media.
3. To study media preference for leisure time.

2.2 Background Studies

2.2.1 Importance of judges

Indian judicial system consists of Supreme Court which is apex body for all criminal and civil hearing. At the next level comes the high court for each state and common high courts for some states and at the third level comes the district courts in each district for hearing criminal and civil cases at that level. Beside this other court are also available such as family courts, consumer courts, tribunals etc. (Paranjape 2006).

Judicial system is one of the pillars of Indian democratic system so as the Judges are the important part of Indian society. They get special respect due to the nature of profession they are involved. Historically also they get especial places in Indian society as they were described as 'God' in Hindi proverb "Panch Parameshver" which means the five judges of panchayat were considered as equivalent to God and their judgments were followed without question (Prem Chand, Panch Pramerswar,). These 'panchs' were the Skelton of judiciary system at village level that existed since time immoral. Panchayat is the traditional form of administrative and judicial units at the village level for the governances and judicial functioning. Earlier the elders and influential peoples of villages were used to hold the post of four panchs and one surpanch making the total of five. But now these panch are elected leaders after the implementation of Panchayati Raj Vavatha. Now they are only administrative unit and judicial functioning is not given to them. Many legends are associated with the judges. Only those kings were considered to be good and kind who were good at judgment (Nyay Priya in Hindi). Tales of Judgments given by king Vikramaditaya, Raja Boj, Jahangir etc are still very popular. 'Jataka' and 'Panchtra' tells quick and inspiring judgment stories which not only give moral lesson but also demonstrate the importance of being in the positions of judge and responsibility associated with it.

In this paper judges of the district level are chosen to study for their preference and how they involve media for their leisure time management. To understand the people under study we need to understand the nature of judicial structure at district level. The district court is present in each district (administrative unit) and it may be common for some districts where the population is less. These courts deal both civil and criminal cases. Out of three tier system of district courts, The court of Judicial Magistrate (JM) is the lowest court for criminal proceedings. The Court of Judicial Magistrates can make a decision on criminal cases punishable with imprisonment of up to 5 years. On the civil side, lowest level is the court of Civil Judge (Junior Division) which, decides small financial cases.

In hierarchy middle court is the Court of the Chief Judicial Magistrate (CJM) on the criminal side and Court of Civil Judge (Senior Division) on the civil side. Civil Judge (senior division) can make a decision on civil cases of any valuation. There are numerous additional courts of Additional Civil Judge (senior division) for smooth functioning and with same Jurisdiction of the principal court of Civil Judge (Senior Division). On criminal side the Chief Judicial Magistrate (CJM) can try those cases which are punishable up to the imprisonment of 7 years. At the top level there is court of district and sessions judge assisted by courts of additional district and sessions judge having same judicial power as of the district and sessions judge (http://indiancourts.nic.in/main_continue.html)

2.2.2 Interaction with media

Judges when interact with media first thing that comes in the mind is 'conflict with media'. The reporting of cases from the court room sometimes leads to the contempt of court, and both of them blame each other crossing their jurisdiction and other kind of conflicts also comes to the surface. But the judges also interact with media in other way. The combination of personal and mass media technology is useful for professional activities of district level judges (Singh & Singh, 2012). They spend time with media, watch television and cinema, and listen to the radio, read newspaper and magazines. They have different media preference at different time of day also different program preferences. The researcher tries to understand their media presences. Media preference means different thing to different people—for programmer it means to understand the choice of the receiver and according to that they change the content and format of their programme. For the advertisers it helps in deciding the market segmentation and media choice for putting advertisement at right time. For the receiver it is their choice of programme they want to receive at a particular time. According to the dictionary of Macmillan preference is defined as a feeling of liking or wanting someone or something more than someone or something else. It is also defined as a greater liking for one alternative over another or others. As the judges are highly qualified and consider having judgmental nature at every aspect of choosing for their personal use also the study of their media preferences is crucial for media and advertisers. By choosing the paradigm of use and gratification the study can proceed well. (Kraaykamp & Van Eijc, 2005). The results of people choice study (1940) that many psychological factors play role in different media effect. People try to create balance between ideas around them and their own self image. (Rodman, 2001, p. 279) This leads to the selective media exposure, perception and retention and also for their media preferences. During 1960s and 1970s researchers argued that audience use media to satisfy certain psychological needs that may by need of information, social interaction and entertainment. They also use media according to their mood or for appearing well informed in front of their friends. (Stewart, Lavelle, & Kowaltzke, 2001, p. 65) The live example I had gone through when my husband who is professor in management department asked me and my daughter to switch to news and sports channel because he felt embarrassed for lagging behind his colleague about the current information about IPL (April 2012). My little daughter prefers cartoon channels and me the daily soap operas leading my husband to watch the same what we watch in evening time on television. Also there is occasional fight between my friend and her husband over the possession of TV remote and preferred channel. Thus individual members in an audience made conscious and motivated selection of channels and programmes (Kumar, 2001, p. 330)

3. Research Methodology

To understand the media preferences and leisure time management of judicial officers of Jaunpur district, 50 judges are selected as sample for collecting primary data. The finite universe of the working and retired judges of the Jaunpur is around 200. In absence of sampling Frame the researcher has taken list of retired judges from 'Vikas Pustika of Jaunpur district' which is published by 'Suchana aur Jan Sanchar vibhag' of district and list of working judges is obtained from the office of district court. Kolmogorov test is used for testing the hypothesis as it is appropriate for comparing observed and expected preferences (Churchill, Lacobucci, Israel, 2010).

3.1 Sampling Method

For conducting successful study purposive sampling is done. 50 judges are chosen from the finite number of 200. Further these 50 judges are divided into two category of working and retired, and 25 judges are selected from each category. Structured interview, questionnaire and observation methods are used for data collection.

3.2 Editing and Tabulation of Data

After collecting raw data, it is examined for detecting errors and omissions to correct where ever it is possible. Careful inquiry is done of the finished questionnaire. Editing is done to guarantee that the data are precise, reliable with the particulars gathered, consistently entered, as inclusive as possible and arranged to make possible coding and tabulation. Central as well as field editing is done. When any type of difficulty were faced in determining the answer, respondents were contacted again for explaining. In case of non possibility of appropriate respond the entry of 'No Answer' was made for the doubtful replies. Assembled data is arranged it in form of rows and columns of table.

4. Analysis and Interpretation

4.1 Newspaper Preference

The researcher tries to understand the preference of judges about the newspaper; they prefer business newspaper or regular newspaper? As the chance of choosing is equal the null hypothesis that follows:

H1 – there is no preference of newspaper among judges.

The null hypothesis is that there is no preference of newspaper among judges, so it would be expected that 50% of sample would like each newspaper. The cumulative distribution function resulting from this assumption is presented in table 1.

Kolmogorow–Smirnow D is equal to the absolute value of maximum deviation between observed cumulative preference proportion and theoretical preference proportion. In case of newspaper preference of judges, Calculated D=0.5-0.1=0.4 and Critical D (for large sample) = 1.36/√50=0.192. Calculated D exceeds the critical value, therefore null hypothesis is rejected and preference for regular newspaper appears to be true.

Table 1. Observed and theoretical cumulative distribution of newspaper preferences

Types of newspaper	Observed number	Theoretical observed proportion	Cumulative proportion	Theoretical proportion	Cumulative proportion
Business newspaper	5	0.10	0.10	0.50	0.50
Newspaper	45	0.90	1.00	0.50	1.00

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4.2 Time Preference for Reading Newspaper

When asked about the time preference for reading newspaper all the judges tell that they find morning hour most suitable for reading newspaper. No judge opt for breakfast time, evening or bedtime for reading newspaper. All the judges prefer morning hour for reading newspaper as depicted in the table 2.

4.3 Media Preference in Morning Hour

When asked which media they prefer to use during morning all the judges votes for newspaper. Newspaper reading is the most preferred media habit in morning hour for the judges (table 3).

4.4 Preference for Other Media in Absences of Morning Newspaper

In case of not arrival of their regular newspaper the judges were asked about their media choice. The null hypothesis derived by the researcher is H2 - there is no preference for media in case of absence of regular newspaper. The following data is available about the media choices in absences of regular newspaper (table 4).

Figure 1 shows 44% judges does not bother any substitute newspaper if their regular newspaper does not arrive,while 18% goes for any other newspaper, 28% goes for electronic media and only 10% goes for book or magazine. In this case Kolmogorow –Smirnow D is very close to the absolute value of maximum deviation between observed cumulative preference proportion and theoretical preference proportion. Calculated D exceeds the critical value, while one option of questionnaire 'does not bother' leads, logically it can be concluded that they want their regular newspaper, but in absence of that they may go for others.

4.5 Time Spent for Reading Newspaper

When asked how much time they spend with newspaper. The statistic show that more of the judges (72%) prefer to read newspaper for less than one hour (table 5).

Page preferences during first reading- when asked which page they first read (table 6).

Table 2: Time preference for reading newspaper

Answer	Number	percent
Morning hour	50	100%
Breakfast time	0	0%
Evening	0	0%
Before going to bed	0	0%

Table 3. Media preference in morning hour

Answer	Number	Percentage
Newspaper	50	100%
Television	0	0%
Radio	0	0%
Internet	0	0%

Table 4. Preference for other media in absences of morning newspaper

Answer	Number	Percent
Other Newspaper	9	18%
Magazine/book	5	10%
Electronic media	14	28%
Does not bother	22	44%
Total	50	100%

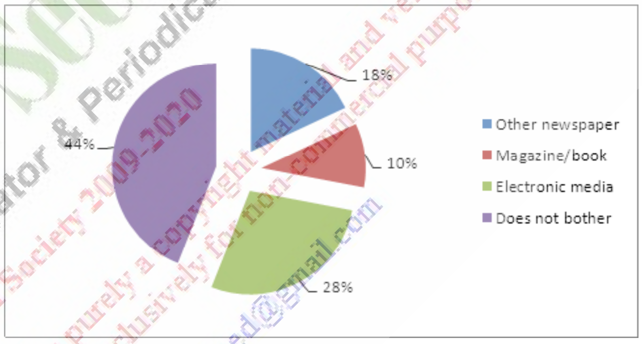

Figure 1. Media options of unavailability of Newspaper

Table 5. Time spent for reading newspaper

Answer	Number	Percent
Less than half an hour	18	36%
More than half an hour	18	36%
One to two hour	14	28%
Total	50	100%

Table 6. Page preferences

Answer	Number	Percent
Front	23	46%
Sports	9	18%
Business	0	0%
Local	14	28%
Editorial	4	8%
Supplement	0	0%
Total	50	100%

4.6 Media they Prefer Most for Spending Leisure Time

It was considered by the researcher that there are no particular choice or media preferences for leisure time spending. The null hypothesis arrived on the basis is:

H3 –there is no media preference for leisure time spending.

When asked which media they prefer to spend leisure time 23 of them given newspaper as their first choice (table 7).

In one sample Kolmogorov-Smirnov test the mean value is 2.100 and standard deviation is 0.81441 for normal deviation. The "Absolute value of most extreme difference (D) is found to be 0.369(table 8) and the Asymp. Sig (2-tailed) is less than 0.05 which indicates the rejection of null hypothesis, therefore it can be concluded that during leisure time they have significant media preference.

4.7 Media Preferences during Travelling

Figure 2 shows during travelling highest percentage of judges (64%) reads the magazine,followed by newspaper (18%).10% does not bother for anyone, while 8% uses anyone.

Table 7. Media preference for spending leisure time

Answer	Number	Percent
Newspaper	23	46%
Television	14	28%
Radio	0	0%
Magazine	4	8%
Folk media	0	0%
Internet	9	18%
Total	50	100%

Table 8. One-sample Kolmogorov-Smirnov test

	Media options
N	50
Normal Parametersa	2.1000Mean
	.81441S. D.
Most Extreme Differences	.369Absolute
	.369Positive
	-.271Negative
Kolmogorov-Smirnov Z	2.608
Asymp. Sig. (2-tailed)	.000
a. Test distribution is Normal.	

4.8 Time Preferred for Watching Television

When asked at what time they preferred to watch Television 4 out of 50 tell they prefer Morning hour for watching TV. 14 of them prefer evening hour. 36 of them prefer night and 9 of them preferred late night hours for watching Television. This statistic arrived because some of the judges preferred to watch Television more than once in a day and opt for more than one answer (table 9).

8% of the respondents prefer morning hour for watching TV. 28% preferred evening hour. 72% of them prefer night hour and 18% prefer late night hours.

5. Conclusion

The study reveals that judges certainly have preferences in media selection during different hours of the working day. In morning hours judges prefers to read newspaper over any other form of media. Also they prefer regular newspaper over business newspaper. They prefer to devote less than one hour for newspaper reading. Newspaper reading also show specific pattern as the front page is most read among all other pages of newspaper. During night time television is most preferred media. Radio gets only half an hour on holidays. Leisure time is mostly spent with newspaper and television. Most of the judges spend around one hour with television. While traveling they prefer to read magazine, the analysis show there is significant preference about the selection

Table 9. Times Preferred for Watching Television

Answer	Number	Percent
Morning	4	8%
Evening	14	28%
Night	36	72%
Late night	9	18%

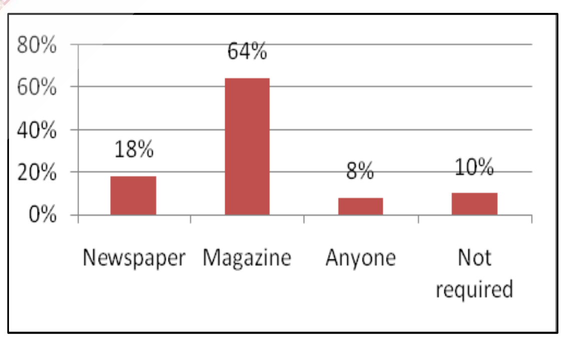

Figure 2. Media usage while travelling

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of media at different hours of the day. Also there are significant preferences in media selection during leisure time management while there is no significant preference of type of media selection in case of absences of regular newspaper.

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Biologically Inspired Computing Technique for Optimizing Discontinuous Mathematical Functions

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Abstract

This paper explores the immense capabilities of the recently proposed biologically inspired soft computing technique named Particle Swarm Optimization for the optimization of non-convex, nonlinear and discontinuous mathematical functions; which primarily focus upon the attainment of the global optimum, despite of the existence of local multi-optimums in the vicinity. This technique uses an innovative distributed intelligent paradigm for solving optimization problems that originally took its inspiration from the biological examples like bird flocking and fish schooling. This is also a population-based optimization tool, which could be implemented and applied easily to solve various function optimization problems. But unlike Genetic Algorithm it uses only primitive mathematical operator and does not uses cross-over, mutation and reproduction. Potential of this technique is illustrated by implementing it on the well known bench mark mathematical problems which includes Rastrigins, Ackley, Alpine, and Schaffer's F6 functions.

Keywords: biological, genetic algorithm, PSO

1. Introduction

In few last years, it has been observed that optimization algorithms is not only very attractive by the research group but also by the person from industrial side. In the field of evolutionary computation (EC), inspiration for optimization algorithms basically comes in Darwin's ideas of evolution and survival of the fittest. This type of technique is usefull for an evolutionary proces. This is required where the purpse is to find out the answer solutions with help of of crossover, mutation, and selection which is dependenet on their quality wrt to the optimization problem. Evolutionary technique are very useful to solve the problen which is related to organization where industrial products come in picture, this is due that they have idea to solve such type of problem with non-linear limitation or restriction, different type of aims, and dynamic components-charaterstics that frequently comes in real world. This paper introduces such an algorithm called PSO and demonstrates its potential on real-world mathematical problems.

Swarm Intelligence (SI) is a new idea to produce distributed intelligent model for solving optimization problems that starts its a good idea from the biological examples by swarming, flocking and herding phenomena in vertebrates (Eberhart & Kennedy, 1995; Kennedy & Eberhart, 1995; Parsopoulos & Vrahatis, 2001). Particle swarm optimization has two methodologies. It may be more obvious are its ties to artificial life in general, and to bird flocking, fish schooling, and swarming theory in particular (Parsopoulos & Vrahatis, 2002; Eberhart & Hu, 1999).

It is also related, however, to evolutionary computation, and has ties to both genetic technique and evolutionary programming (Shi & Eberhart, 1998; Lis & Eiben, 1996). The initial ideas of James Kennedy (a social psychologist) and Russel Eberhart (an engineer and computer scientist) were essentially aimed at producing computational intelligence by exploiting simple analogues of social interaction (Zitzler, Deb, & Thiele, 1999)., rather than purely individual cognitive abilities. Their simulations were influenced by Heppner's works, which involve analogues of bird flocks searching for corn.

Swarm system is a rich source of novel computational methods that can solve difficult problems efficiently and reliably. When swarms solve problems in nature, their abilities are usually attributed to swarm intelligence; perhaps the best-known examples are colonies of social insects such as termites, bees and ants. One of the best-developed techniques of this type is Particle Swarm Optimization.

For applying PSO successfully, one of the key issues is finding how to map the problem solution into the PSO particle, which directly affects its feasibility and performance.

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2. Particle Swarm Optimization

2.1 Swarms and Particles

This particular term i.e. swarm is used in accordance with a paper by Millonas. He articulated five basic principles of swarm intelligence:

a) Proximity principle
b) Quality principle
c) Diverse response
d) Principle of stability
e) Principle of adaptability

The principles four and five are the opposite sides of the same coin. The particle swarm optimization concept and paradigm presented in this paper seem to adhere to all five principles.

2.2 Overview of PSO Technique

The algorithm of PSO is initialized with a population of random solutions, called 'particles'. Each particle in PSO flies through the search space with a velocity that is dynamically adjusted according to its own and its companion's historical behaviors. The particles have a tendency to fly toward better search areas over the course of a search process. During flight, each particle keeps track of its coordinates in the problem space, which are associated with the best solution (fitness) it has achieved so far. (The fitness value is also stored.) This value is called 'pbest'. Another 'best' value that is tracked by the particle swarm optimizer is the best value, obtained so far by any particle in the neighbors of the particle. This location is called 'lbest'. When a particle takes all the population as its topological neighbors, the best value is a global best and is called 'gbest'. The particle swarm optimization concept consists of, at each time step, changing the velocity of (accelerating) each particle toward its pbest and lbest locations (local version of PSO). Acceleration is weighted by a random term, with separate random numbers being generated for acceleration toward pbest and lbest locations.

Each particle tries to modify its position using the concept of velocity. The velocity of each agent can be updated by the following equation:

$$v_i^{k+1} = \omega v_i^k + \psi_1 rand_1 \times (pbest_i - s_i^k) + \psi_2 rand_2 \times (gbest_i - s_i^k) \tag{1}$$

where v_i^{k+1} is velocity of agent i at iteration k, ω is weighting function, ψ1 and ψ2 are weighting factors, $rand_1$ and $rand_2$ are random numbers between 0 and 1, s_i^k is current position of agent i at iteration k, $pbest_i$ is the *pbest* of agent i, and *gbest* is the best value so far in the group among the *pbests* of all agents.

The following weighting function is usually used:

$$\omega = \omega_{max} - \left(\left(\omega_{max} - \omega_{min}\right) / \left(iter_{max}\right)\right) \times iter \tag{2}$$

Where, ω_{max} is the initial weight, ω_{min} is the final weight, $iter_{max}$ is the maximum iteration number, and *iter* is the current iteration number. Using the previous equations, a certain velocity, which gradually brings the agents close to *pbest* and *gbest*, can be calculated. The current position (search point in the solution space) can be modified by the following equation:

$$s_i^{k+1} = s_i^k + v_i^{k+1} \tag{3}$$

2.3 Algorithm for Particle Swarm Optimization

1. Initialize the size of the particle swarm *n*, and other parameters.
2. Initialize the positions x_i and the velocities v_i for all the particles randomly.
3. While (the end criterion is not met) do:
4. Calculate the fitness value of each particle;
5. Update pBest, (If fitness value is better than the best fitness value (pBest) in past, set current value as the new pBest).
6. Update gBest, by choosing the particle with the best fitness value of all the particles as the gBest
7. For i=1 to n;
8. Calculate particle velocity according to equation (1).
9. Update particle position according to equation (3).
10. Next i.
11. End While.

Flowchart for PSO algorithm is shown in figure 1

2.4 Parameters of PSO

The role of inertia weight ω, in Eq. (2), is considered critical for the convergence behavior of PSO. The inertia weight is employed to control the impact of the previous history of velocities on the current one. Accordingly, the parameter ω regulates the tradeoff between the global (wide-ranging) and local (nearby) exploration abilities of the swarm. A suitable value for the inertia weight ω usually provides balance between global and local exploration abilities and consequently results in a reduction of the number of iterations required to locate the optimum solution. Initially, the inertia weight is set as a constant. However,

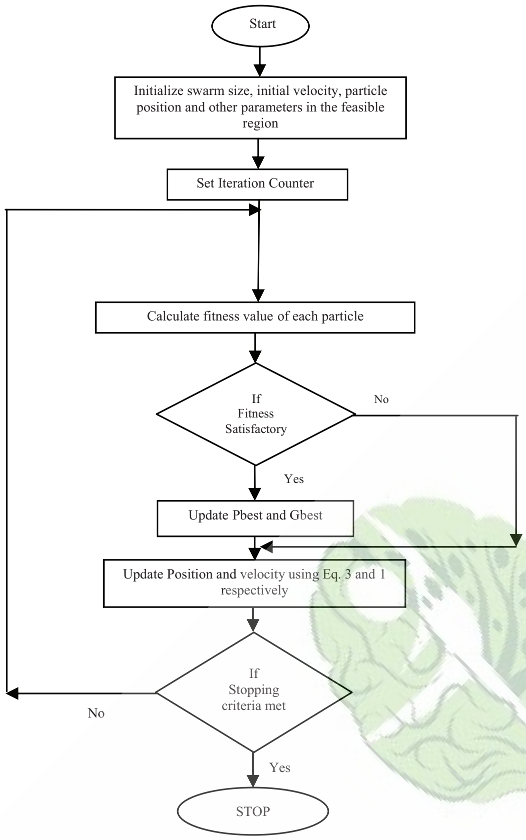

Figure 1. Flow chart for proposed PSO method

some experiment results indicates that it is better to initially set the inertia to a large value, in order to promote global exploration of the search space, and gradually decrease it to get more refined solutions.

The parameters ψ_1 and ψ_2, in Eq. (2), are not critical for the convergence of PSO. However, proper fine-tuning may result in faster convergence and alleviation of local minima. As default values, usually, $\psi_1=\psi_2=2$ is used, but some experiment results indicate that $\psi_1=\psi_2=1.49$ might provide even better results. Recent work reports that it might be even better to choose a larger cognitive parameter, ψ_1 than a social parameter, ψ_2 but with $\psi_1+\psi_2\leq 4$.

2.5 Boundary Conditions

Often in engineering applications it is desirable to limit the search to what is physically possible. Experience has shown that, constriction factors, and inertial weights do not always confine the particles within the solution space. To address this problem, the authors have imposed three different boundary conditions as shown in figure 2.

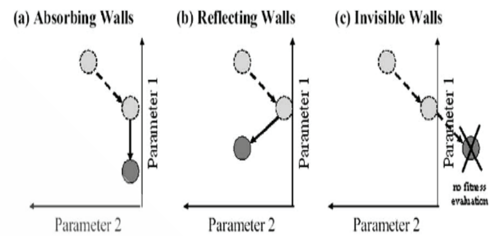

Figure 2. Boundary conditions for swarms

1) Absorbing Walls: When a particle hits the boundary of the solution space in one of the dimensions, the velocity in that dimension is zeroed, and the particle will eventually be pulled back toward the allowed solution space. In this sense the boundary "walls" absorb the energy of particles trying to escape the solution space.
2) Reflecting Walls: When a particle hits the boundary in one of the dimensions, the sign of the velocity in that dimension is changed and the particle is reflected back toward the solution space.
3) Invisible Walls: The particles are allowed to fly without any physical restriction. However, particles that roam outside the allowed solution space are not evaluated for fitness.

For nearly all-engineering applications, the computationally expensive portion of the algorithm is the fitness evaluation. The motivation behind this technique is to save computation time by only evaluating what is in the allowed solution space, while not interfering with the natural motion of the swarm. The results show that the "invisible walls" technique proves slightly better than other techniques.

2.6 End Criteria

There are several methods to determine the termination criteria. Various methods have been used by the various researchers; most common methods are listed below.

a) *Maximum Number of Iteration:* With this termination condition, the PSO ends when the process has been repeated a user-defined number of times. Although, the best result is not guaranteed, but this method is used most of the times. The reason is its simplicity and generality.
b) *Number of Iterations without Improvement:* In this case the optimization process is terminated after some fixed number of iterations if any improvement is not obtained. The number decided should be such that case of particles being trapped in local maxima (or minima) is eliminated.

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c) *Minimum Objective Function Error:* The optimization process is terminated if the error between the obtained objective function value and the best fitness value (target value) is less than a prefixed threshold. At any time if a solution is found that is greater than or equal to the target fitness value, then the PSO is stopped at that point. This is useful when one has a very specific engineering goal for the value of the fitness function, and is not necessarily concerned with finding the "best" solution. In some cases if a solution is found to be better than the target fitness, then the solution is good enough and there is no reason to continue to run.

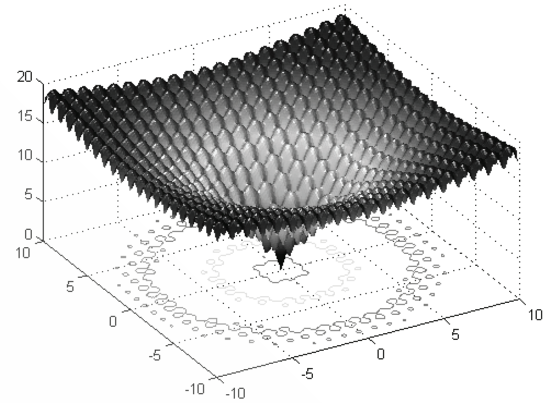

Figure 3. Ackley Function plot in 3-dimensions

3. Simulation Results

We need to build fitness function, which uses the program being evaluated as the function in a PSO, and evaluates the performance of the resulting PSO on a training set of problems taken from the given class.

3.1 BenchMark Functions

This technique is tested on functions with many local minima like Ackley function, Rastrigin's function, Alpine function and Schaffer's F6 function.

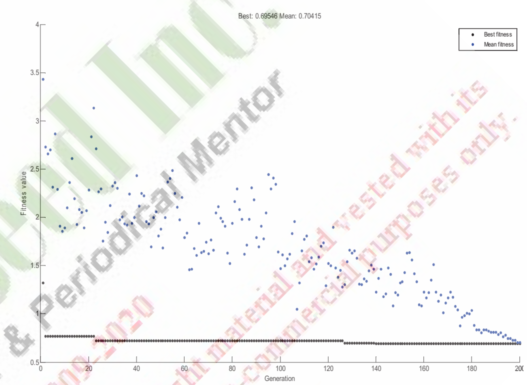

Figure 4. Swarm Convergence during iterative run for Ackley

3.1.1 Ackley Function F1 (Minimization)

$$20+e-20\exp\left(-0.2\sqrt{\frac{1}{n}\sum_{i=1}^{n}x_i^2}\right)-\exp\sqrt{\frac{1}{n}\sum_{i=1}^{n}\cos(2\pi x_i)}$$

where, $-10\le x_i\le 10$

Figure 3 and 4 shows the Ackely function and PSO convergence during iterative runs.

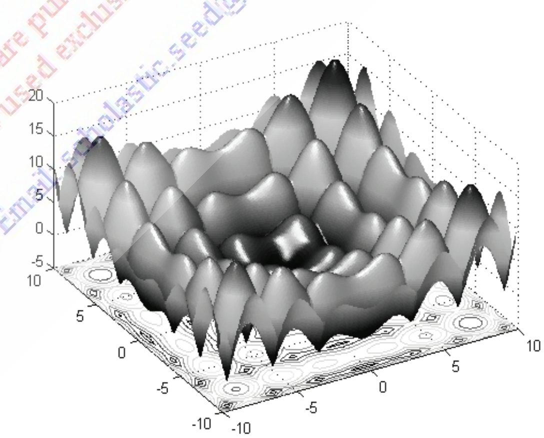

Figure 5. Alpine function plot in 3-dimensions

3.1.2 Alpine Function

$$0.1\sum_{i=1}^{n}x_i+abs\left(\sum_{i=1}^{n}x_i\sin x_i\right) \text{ where, } -10\le x_i\le 10$$

Figure 5 and 6 shows alpine function and its convergence.

3.1.3 Schaffer Function F6 (Minimization)

$$0.5+\frac{\sin^2\left(\sqrt{x_1^2+x_2^2}\right)-0.5}{\left(1.0+0.001\left(x_1^2+x_2^2\right)\right)^2} \text{ where, } -100\le x_i\le 100$$

Figure 7 and 8 shows Schaffer function and its convergence.

3.1.4 Rastrigin function F1 (Minimization)

$$\sum_{i=1}^{n}\left(x_i^2-10\cos(2\pi x_i)+10\right) \text{ where, } -5.15\le x_i\le 5.12$$

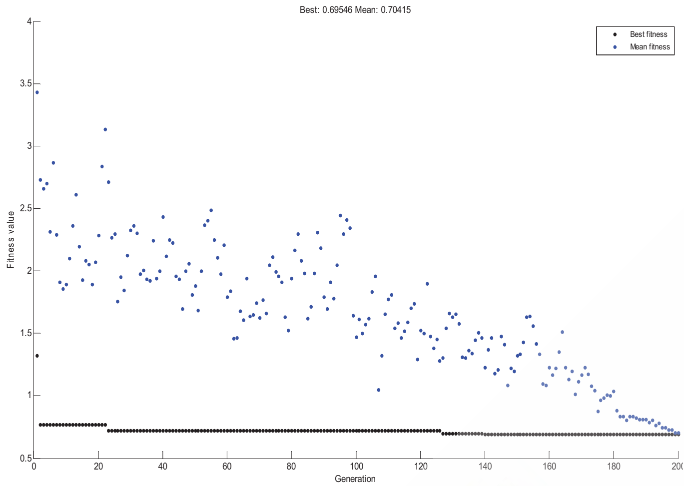

Figure 6. Swarm Convergence during iterative run for Alpine.

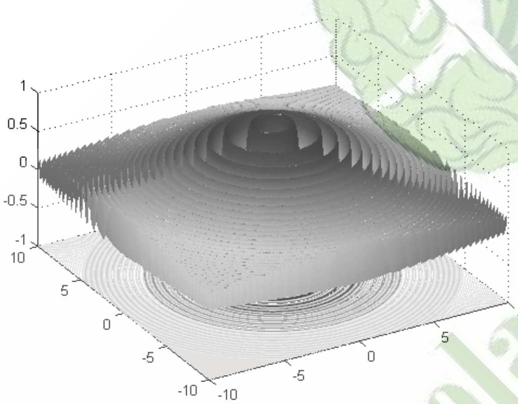

Figure 7. Schaffer Function F6 in 3-dimension.

Figure 9 and 10 shows Rastrigins function and its convergence using PSO minimization Technique.

Numerical simulations show that the proposed algorithm is very effective to deal with the multi objective optimization problems.

It is not the case in the proposed algorithm, only a small population size is needed to obtain the desired results. In addition, the proposed algorithm can be understood and performed easily because there is no operation such as 'crossover" and "mutation" used in other evolutionary algorithms solving multi-objection problems.

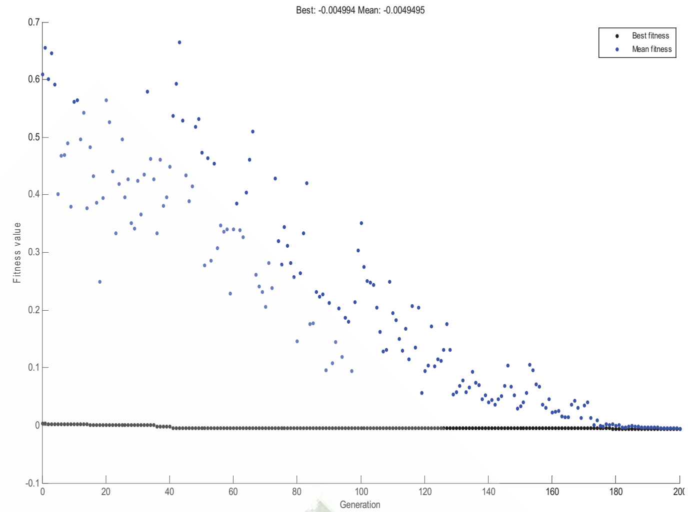

Figure 8. Swarm Convergence during iterative run for Schaffer F6.

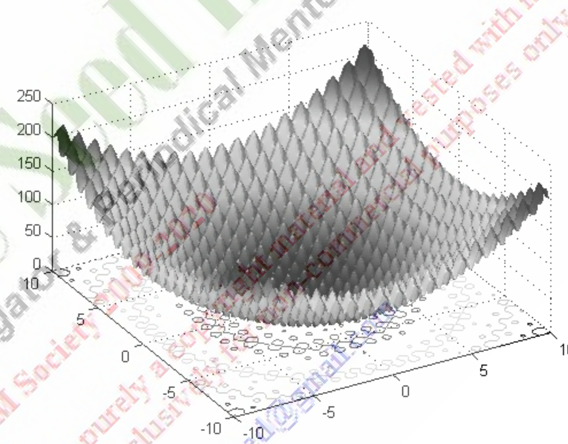

Figure 9. Rastrigin function plot in 3-dimensions.

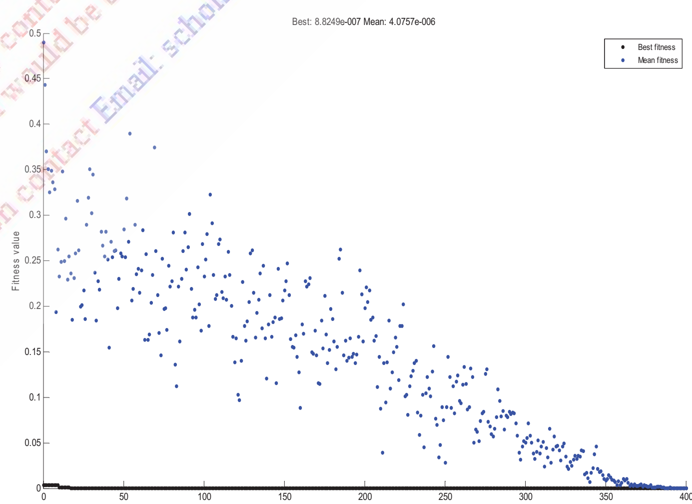

Figure 10. Swarm Convergence during iterative run for Rastrigin.

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Generational Diversity: A Challenge For Leading Lights: An Analytical Study in the Education Sector

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Abstract

Workplaces today are highly diversified with the employees coming from different countries, belonging to differences races, age groups, religions and having gender differences which results into workforce diversity. Valuing such a diverse workforce means being fully aware of differences in behavior and strengths, acknowledging biases/prejudices and avoiding assumptions among the employees and focusing on job performance and conduct. The generation to which a person belongs is one of the very important determinant of workforce diversity. It is reasonable to expect that someone from your own era or a person sharing same birth years will have quite a bit in common due to the environmental factors which they were all exposed to and shaped by when they were young. At present, workforce representing four generations viz. Traditionalist, Baby Boomers, Generation X and Generation Y are working side by side in the organizations. It is evident from the previous researches that differences in the attitudes, values, and beliefs influences the expectations for leadership across generations. In this paper, a modest attempt was made to check whether significant differences exist among faculty members towards the expected leadership styles. A sample size of 690 faculty members from management colleges in Delhi and NCR region was selected. Using Factor Analysis and One Way Anova, it was observed that there are significant differences in preferences of Baby Boomers, Generation X and Generation Y members for their preferred leadership styles. The study calls the attention of HR Managers to this fact and suggest them to revise their leadership styles keeping in mind the changing needs and expectation of diverse workforce.

Keywords: workforce diversity, leadership styles, generations, baby boomers

1. Introduction

Workplaces today are facing acute difficulty not because there is downsizing, changes because of technology, severe competition or greed for authority or resources. It is a difficulty resulting from differences among individuals because of their diverse view points, perception, ambitions and work styles. Workplaces today are highly diversified with the employees belonging to different genders, religions, age groups, qualifification and countries. This demarcation among the workforce is called workforce diversity. For reeping the benefits of workforce diversity, it is very important to understand the differences among diverse employees, their work styles, their preferences and then managing them in a way so that both organization and employees themselves get benefitted from the differences which they are bringing to the workplace. In other words, it emphasizes to remain conscious about the needs and expectations, accepting biases/differences in opinions, controlling their strengths and motivating each and everyone towards job performance.

This paper will be focusing on Generational Diversity among workforce. Generational cohorts include individuals born around the same time who share distinctive social or historical life events during critical developmental periods. Each generation is influenced by broad forces for eg. their family background, culleagues, media, social and cultural events that create common value systems which distinguish each generation from the other growing up at different times. This makes it easy to predict and understand how the different generational groups or the people born during the same time prefer to be communicated with, motivated, recognized and rewarded.

The study seeks to explain the generational differences among the three generations i.e. Baby Boomers, Generation X and

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Generation Y on preferred leadership styles among University teachers. To achieve the objectives of the study, the paper has four sections, Section 1 gives the introduction of workforce diversity and a brief overview of generational differences, Section 2 gives extensive review of present literature across globe, defining the different generations, their characteristics and their influence on leadership expectations. Section 3 gives data and methodological issues. Section 4 gives summary fo findings, implications for HR Managers and Recommendations. References form the part of last section.

2. Review of Literature

2.1 Leadership

A leader is one directs the efforts of his followers towards meaningful performance and motivate them to strive hard for achieving objectives effectively. In other words, it is a behavioural quality through which people guide and control other's activities to achieve common goals. He defines the objectives of his subordinates and and guide them towards achieving those objectives. He also creates and sustains enthusiasm among them for achieving organisational objective (Aswathappa, 2010; Robbins, 2003).

2.2. Generational Differences

Present workforce is divided among four groups each having their unique needs, expectations and requirements from the workplace. These four groups as suggested by Lancaster & Stillman (2002) and Hammill (2005) are as follows:

1. Veterans. - Born between 1922 and 1945. This generation is also known as seniors or traditionalists. They grew up with a sense of duty. They see work as an obligation and believe that authority must be respected (Hammill et al. 2005). They have an individual work style and a preference for clear leadership through command and control (Hammill et al. 2005). Veterans tend to have a strong work ethic and prefer an element of discipline in the workplace (Murphy, 2010).
2. Baby Boomers - Born between 1946 and 1964. Just like Veterans, Baby Boomers too have a good work ethic. However, unlike Veterans, they prefer tasks which involves teamwork (Hammill et al. 2005). They wish to be involved with the decision-making process which means that a more consensual leadership style is most appropriate for Baby Boomers (Murphy et al. 2010). They value the personal attachment and direct contact. Therefore, direct interaction or face to face communication is highly appreciated by this generation (Hammill et al. 2005).
3. Generation X - Born between 1965 and 1980 and they are also called as Gen Xers. This generation sees work differently as compared to their seniors. They like independent tasks and want to do things in their own way (Murphy et al. 2010). For them everybody is equal and resist following rules and regulations strictly. They are more entrepreneurial in their approach towards work, and appreciate direct and instant feedback on their performance (Hammill et al. 2005; Zemke, Raines, & Flipczak, 1999).
4. Generation Y Born between 1981 and 2000 and also known as Gen Y, Millennial Generation or Echo Boomers, this generation is the most up-to-date generation at workplace. As compared to Generation X, they have a more participative approach to work and like to work in teams. They are strong promoters of work to live and believes in maintaining balance between work and family life (Hammill et al. 2005). They set high standards for setting their goals and gets satisfaction by achieving them. (Murphy et al. 2010). They also emphasise creativity and gets motivated by using different ways and methods for doing same task. (Murphy et al. 2010). They are connected with technology 24/7 and are multi-tasking (Hammill et al. 2005; Murphy et al. 2010).

2.3 Leadership and Generational Differences

The work characteristics of different generational groups are an important issue for their leaders. It is proved that employees having different work characteristics and different work expectations will prefer different leadership styles (Tulgan, 1996) and their performance and quality of outcome will vary according to their compatability with the given leadership style. Abramson (1997) has concluded that all the developed countries are now moving from 'industry economy' to 'service economy' and then to 'knowledge economy'. With more and more work transforming into 'knowledge work', traditional leadership styles are becoming obsolete. Further, it is also suggested that to be effective, organisation's need to move away from hierarchical position-based structure to knowledge-based influence. Arsenault (2004), in a study conducted in USA found that significant differences were found among four generations for their preferred leadership styles. While Veterans prefers leaders who are loyal and honest, Baby Boomers prefer leaders who are caring, competent and honest. Preferred leadership style for Gen Xers and Gen Yers were determination and ambitious. They want leaders who can challenge the system and are confident for themselves. Yu & Miller (2005) in their study to validate generational differences in preferred leadership styles among the Taiwanese Workforce working in Manufacturing Sector indicated that Baby Boomers tend to be more loyal to employers and willing to accept a 'chain of command' leadership style and hence task-oriented leadership style is more acceptable to Baby Boomers. Generation X wish to be treated as partner rather than a worker and also want to use their power and authority in daily activities. Therefore they prefer a relationship-oriented leadership style.

Sessa, Kabacoff, Deal, & Brown (2007) in their study observed that boomer generation prefers leaders who are persuasive and diplomatic and trustworthy, Gen-Xers value leaders who are optimistic, persuasive, have experience and who recognize their talents and can give them feedback. Millennials valued leaders who were dedicated and creative and cared about them personally.

Of all the literature survey done, it was found that lot of research has been done in various organizations among blue collar and white collar employees. However there is paucity in education sector and this study is a modest attempt to bridge the gap in this sector.

3. Data and Methodology

The study therefore seeks to address the generational issues among faculty members working in Delhi and NCR region and tries to infer whether significant differences exist among different generations towards leadership style preferences.

3.1. Research Objective

To what extent preferences for leadership qualities vary across generations

- H1: There are significant differences on preferences for leadership styles across generations
- H_o: There are no significant differences on preferences for leadership styles across generations

The research design for the present study was basically descriptive and exploratory in nature.

3.2. Survey Instrument

For studying the leadership expectations, a version of Kouzes and Posner's (Pierce & Newstrom, 2000) Checklist of Admired Leaders is taken for reference wherein interviewers are required to rate the characteristics they most admire in leaders. A Likert Scale of five was used from 1 being Significantly Important to 5 being Significantly Unimportant.

A convenience sample of faculty members working in Delhi and NCR area was used for the study. Questionnaires were distributed to around 1100 respondents. The survey resulted in a 62.7% return rate with 690 usable responses. The response population was 38% female and 62%% male, with 46% participants identifying themselves as Assistant Professors, 25% identifying themselves as Associate Professors and 29% identifying as Professors. It was ensured that all generations under study are represented in equal number in participant population (refer tables 3–5).

Factor Analysis and ANOVA were used to find out the differences among generations on their leadership expectations.

4. Empirical Results

This section contains the analysis and interpretations of results. To begin the analysis sample adequacy test was conducted the results of which are shown in table 1. The results are satisfactory with the value of KMO and Bartlett's Test as. 834 (refer table 6). This is in the acceptable range (Jolliffe, 2002; Nargundkar, 2005). Three factors have been extracted which cumulatively explained 60.937% of the total variance (refer table 7).

After the number of extracted factors is decided, the next task of researcher is to give appropriate names to the identified factors.

Factor 1: Fairness and Competency

This factor has been named as Fairness and Competency as it includes being careful, ambitious, competency in job and honest to subordinates. It can be therefore concluded that being fair and competent is one of the most important leadership quality appreciated by the employees at work place.

Factor 2: Team Orientation

This has been revealed to be next most important factor with explained variance of 20.237%. Being able to give best to the team members, self-confidence and encouraging team performance rather than individual performance were loaded high on this factor and thus the factor has been named as leader's Team Orientation.

Factor 3: Creativity and Foresightedness

This is the next important factor with 18.962% of the variance. Three leadership qualities loaded high on this factor included forward looking, completing assignments on time and good imagination and creative skills. The factor has been named as Creativity and Foresightedness.

4.1. Effect of Generations on Various Reason Factors

For ascertaining whether significant difference exists between various generations, One way ANOVA is applied.

Decision Rule: When the significance value of F-test/Welch test is less than 0.05, Null hypothesis is rejected. When the Null Hypothesis is rejected, Post Hoc analysis will be used for further ascertaining which groups differ among their mean score.

Summary of Findings

1. The results of the analysis of the ten leadership expectations measured in the study indicated that there were significant differences among the generations on two out of three factors extracted through principal component analysis. (refer table 9)

Table 1. Showing loadings of preferences for leadership factors

Factor No.	Name of Dimension	Item No.	Variables	KMO[1]	Variance Explained[2]	Factor loading	Reliability[3]
1	Fairness and Competency	54	A leader must be caring towards his subordinates.	.834	21.738	.837	0.715
		53	A leader must be very ambitious.			.738	
		55	A leader should be competent enough in his job to lead others.			.643	
		58	A leader should be very honest to his job and organization.			.453	
2	Team Orientation	61	A leader should be able to motivate his team members to give their best.		20.237	.785	0.662
		62	A leader must be self - confident.			.744	
		60	A leader should encourage team performance rather than individual performance.			.646	
3	Creativity and Foresightedness	57	A leader should always be forward looking.		18.962	.805	0.718
		58	A leader should have the strong determination to complete all the assignments very successfully.			.759	
		59	A leader should have good imagination and creative skills.			.640	

[1]Refer Table 6
[2]Refer Table 7
[3]Refer Table 8

2. Three factors extracted included, (1) Fairness and Competency, (2) Team Orientation and (3) Creativity and Foresightedness.
3. One way Anova was then applied to these factors to check effect of generations on factors and significant differences were found to exist on two factors, namely Team Orientation and Creativity and Foresightedness.
4. For the factor, Fairness and Competency, there were no significant differences observed among generation. Hence this factor carries equal importance for all the generations.
5. Post hoc analysis (Turkey/Tamhane Method) was employed to find out which generation is different from the other generations based on their mean scores for factors Team Orientation and Creativity and Foresightedness.
6. The questionnaire was developed using Like Scale of 5 wherein '1' referred to Strongly Important and '5' indicated Strongly Unimportant; hence lower the mean score of the factors higher is the importance given by the respondents for that factor.
7. For the factor, Team Orientation, it was found that this factor, Team Orientation, is very important for Baby Boomer Generation (1945–1964) as compared to other two generations i.e. Generation X and Generation Y. (refer table 10).
8. Baby Boomer generation prefer team performance because it always gives them the opportunity to share their ideas and thoughts and satisfy their needs for exchanging feelings and emotions. They are emotional people who don't mind sharing their rewards with each other as they have been brought up in an era where sharing of resources with each other was emphasized whereas other two generations prefer bosses who evaluate performance on individual basis.
9. Similarly, factor Creativity and Foresightedness has also been rated high by Baby Boomer Generation as compared to other two generations. (refer table 11).
10. Baby boomer generation has struggled a lot during their early years. They have learnt to fight with all hardships whatever coming their way. They want their leader also to be forward looking and with strong determination who can look for opportunities outside and then achieve them using their experience and skills. Further, since they experienced scarcity of resources in their early childhood, they have learned how to make big out of small. Similarly, they expect their leader also to have creativity and imagination power so that they can do wonders out of limited resources and prove their point.
11. Descriptive analysis was used to compare preferences of Leadership Expectations across generations based on the mean values (refer table 2).

4.2 Comparison of Findings with Studies across Globe

These results differ somewhat from the results of the prior study (Arsenault, 2004). Arsenault in his study of leadership

Table 2. Top 5 factors influencing leadership expectations across generations

Sr. No.	Leadership expectations	Overall Mean[4]	Ranking		
			Baby Boomer	Gen X	Gen Y
1	A leader must be self - confident.	1.28	1	1	1*
2	A leader should be able to motivate his team members to give their best.	1.33	2	2	1*
3	A leader should always be forward looking.	1.4	3		4
4	A leader should have the strong determination to complete all the assignments very successfully.	1.41*	5	4	3
4	A leader should have good imagination and creative skills.	1.41*	4	3	
5	A leader should be very honest to his job and organization.	1.44		5	2

*. items having same mean scores
[4]Refer Table 12

Table 3. Showing Frequency of Questionnaires filled by each Generation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1945–1964	230	33.3	33.3	33.3
	1965–1980	230	33.3	33.3	66.7
	1981–2000	230	33.3	33.3	100.0
	Total	690	100.0	100.0	

Table 4. Showing number of questionnaire filled by Gender count

		Gender		
		Male	Female	Total
Year of Birth	1945–1964	172	58	230
	1965–1980	143	87	230
	1981–2000	115	115	230
Total		430	260	690

Table 5. Showing No. of respondents according to Year of Birth and Occupation

		Occupation			
		Assistant Professor	Associate Professor	Professor	Total
Year of Birth	1945–1964	15	59	156	230
	1965–1980	106	78	46	230
	1981–2000	197	33	0	230
Total		318	170	202	690

Table 6. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.834
Bartlett's Test of Sphericity	Approx. Chi-Square	1847.009
	df	45
	Sig.	.000

Table 7. Total variance explained

Phase=Rotation Sums of Squared Loadings			
Component	Total	% of Variance	Cumulative %
1	2.174	21.738	21.738
2	2.024	20.237	41.975
3	1.896	18.962	60.937

Table 8. Reliability statistics

N of Items	Cronbach's Alpha (Factor 1)	Cronbach's Alpha (Factor 2)	Cronbach's Alpha (Factor 3)
4	.715	.662	.718

Table 9. Effect of generations on leader factors

Factors	Levene Statistic	Sig.	F	Sig.	Welch Statistics	Sig.
Fairness and Competency	5.728	.003	2.110	.122	1.967	.141
Team Orientation	5.994	.003	3.327	.036	3.395	.034
Creativity and Foresightedness	.592	.554	5.193	.006	5.205	.006

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Multiple Comparisons

Table 10. Test = Tamhane, Dependent Variable= Team Orientation

	(I) Year of Birth	(J) Year of Birth		Mean Difference (I-J)	Std. Error	Sig.
Fairness and	1945–1964	dimension3	1965–1980	-.20641204	.09486421	.088
Competency			1981–2000	-.20879092	.09016133	.062
Team	1965–1980	dimension3	1945–1964	.20641204	.09486421	.088
Orientation			1981–2000	-.00237888	.09372116	1.000
Creativity and	1981–2000	dimension3	1945–1964	.20879092	.09016133	.062
Foresightedness			1965–1980	.00237888	.09372116	1.000

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

Table 11. Test = Tukey HSD, Dependent Variable= Creativity and Foresightedness

(I) Year of Birth		(J) Year of Birth		Mean Difference (I-J)	Std. Error	Sig.
dimension2	1945–1964	dimension3	1965–1980	-.20430999	.09268817	.071
			1981–2000	-.29085790*	.09268817	.005
	1965–1980	dimension3	1945–1964	.20430999	.09268817	.071
			1981–2000	-.08654791	.09268817	.619
	1981–2000	dimension3	1945–1964	.29085790*	.09268817	.005
			1965–1980	.08654791	.09268817	.619

*. The mean difference is significant at the 0.05 level.

Table 12. Mean and standard deviation – leadership expectations

	Year of Birth							
	1945–1964		1965–1980		1981–2000		Total	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
53.A leader must be very ambitious.	1.72	.621	1.64	.644	1.61	.743	1.66	.672
54.A leader must be caring towards his subordinates.	1.56	.593	1.59	.653	1.51	.632	1.55	.627
55.A leader should be competent enough in his job to lead others.	1.41	.590	1.44	.556	1.49	.639	1.45	.596
56.A leader should have the strong determination to complete all the assignments very successfully.	1.35	.477	1.43	.600	1.45	.609	1.41	.566
57.A leader should always be forward looking.	1.30	.485	1.45	.579	1.46	.617	1.40	.567
58.A leader should be very honest to his job and organization.	1.50	.527	1.44	.556	1.38	.562	1.44	.550
59.A leader should have good imagination and creative skills.	1.32	.546	1.41	.543	1.50	.574	1.41	.559
60.A leader should encourage team performance rather than individual performance.	1.39	.564	1.49	.639	1.49	.672	1.46	.627
61.A leader should be able to motivate his team members to give their best.	1.28	.506	1.38	.554	1.33	.490	1.33	.518
62.A leader must be self - confident.	1.20	.429	1.30	.530	1.33	.498	1.28	.490

expectations among generational differences reported top five leadership expectations for Baby Boomer Generation as Honesty, Competence, Loyalty, Caring and Determination. Similarly, in the previous study Generation X preferred leadership style included Honesty, Competence, Loyalty, Determination and Ambitious and generation Y's preferred styles included Honesty, determination, loyalty, competence and ambitious.

The differences noted between this study and previous research may be due to differing age groupings for the generations used in the Arsenault study as compared to this research. Additionally, difference of education and type of work performed by the participants in the respective studies can also be the reason behind the differences in opinions and rankings. Arsenault's study was conducted on under-graduate students while for the present study, the population consisted of teaching faculty members from universities and colleges.

4.3 Implications for Human Resource Managers and Organizations

1. From the study, it was observed that top scored mean items highlighting the preferences for leadership expectations across generations were same for all the generations. This makes the task of organisation and human resource managers even more easy i.e. by concentrating on few factors, they can satisfy the needs and expectation of all the generations.
2. Factors like Self-confidence and Team Orientation of leader were the top rankers in each generation. Managers are therefore required to see that while appointing or recruiting the managerial posts, they should see that candidates have got confidence in themselves and they are good in motivating their team.
3. Forward looking approach, good imagination and creative skills are other important factors which are appreciated by all the generations in their leaders.
4. It was observed that Baby Boomers prefer leaders who evaluate on the basis of team performance rather than individual performance.
5. Generation Y employees prefer leaders who are honest to the organisation. Through literature survey also, it was observed that Generation Y employees are more socially responsible and are ethical in their services towards society. To attract these employees, it is necessary for the organization to enrich their value systems.
6. Generation X employees prefer leaders who are competent enough to lead. The organizations should not just appoint managers based on their knowledge or qualifications. Managers who are really competent enough and have got expertise in their areas should be selected to take the lead roles so that they can motivate the team members under them to contribute their best.
7. Further, it was also observed that though Generation Y employees appreciate leaders who motivate team performance but they want individual feedback and rewards based on their performance. They do not believe in sharing the resources and rewards with team members. While baby boomers don't mind sharing their resources and rewards with their team members.

4.4 Suggestions and Recommendations

1. It was observed that all the faculty members from all generations expect their leaders to be self-confident, forward looking and optimistic. Organsing regular Faculty Development Programmes or Staff Development Programmes on positive personality or optimism can help leaders to win the heart of their team members.
2. Leaders should recognize the different work characteristics between generational groups and apply leadership styles that will contribute positively to employee motivation. For example while Boomers prefer annual performance feedback and wants to be directed as to what is expected out of them, Generation X is individual performer and expects feedback on regular basis. Generation Y on the other hand prefers to work in group where they can share each other's ideas and opinion, but they want their feedback individually and frequently.
3. Changes in job design, system of rewards and organisation structure might also help the organisation to have a sound leader subordinate structure. Baby Boomers and Generation X employees, since experienced, prefer the leadership style where complete freedom is there to take their decisions and the way they want to work. Hence, they can be given an assignment to complete with little supervision and support as and when needed.
4. Generation Y employees can be put under mentors who can guide them and support them and clear their doubts and difficulties. This will give them confidence and also knowledge on how to take decisions under stressful situations.
5. The organization should appoint leaders based on their knowledge, skills and merit rather than their qualification or seniority. Because only talented leaders who are experienced and are experts in their field can lead a team with confidence. This will also develop respect among team members for their leader.
6. The management of Colleges and institute should know how to motivate their team towards giving their best performance. The management therefore is required to have their leader competent enough to meet these expectations. In this way,

they will be able to generate respect towards their immediate bosses which will in turn help in building smooth and effective relationship between management and employees.

5. Conclusion

The above research calls attention to the fact that differences are existing among generations and if serious efforts are not undertaken to develop compatability, there is every possibility for conflict and problems arising between members of different gernational groups. According to a recent survey - nearly 70% of respondents said that their organizations do not have specific programs in place to address generational differences, while one out of three companies reported that generational issues are not important or only somewhat important in their organizations. However, in reality this perception is proving wrong as organizations are frequently turning to consultancies to help them sort out generational problems encountered in the form of communication, leadership, relationships, and their ability to attract and retain key talent. Managers and leaders lead the way which comes naturally to them because of their membership to particular generation without giving a thought to what other generations prefer. This is the root cause of problem and conflicts starts arising. They are required to treat each generation differently. For eg. while Boomers prefer annual performance feedback and wants to be directed as to what is expected out of them, Generation X is individual performer and expects feedback on regular basis. Generation Y on the other hand prefers to work in group where they can share each others ideas and opinion, but they want their feedback individually and frequently.

5.1 Future Research:

The scope of the study was very limited as it is confined to faculty members working in Universities and colleges and Institutes approved by AICTE in Delhi and NCR. Similar research work can be conducted on all India basis to have a wider view of Generational Diversity among different cohorts. Understanding the generations and their expectations can provide useful insights for framing out strategies to attract, develop and retain young university graduates to work in the education industry and stopping the switching over of Generational X faculty members to corporate world who are needed to fill the gap created when Baby Boomers will retire.

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Correlates of Satisfaction & Giving Behavior of IT Working Professionals in Delhi NCR

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Purpose: The purpose of this paper is to develop a perspective that alumni satisfaction has an impact their giving behavior towards the alma mater. This paper proposes that level of satisfaction of alumni can be enhanced by improving the under-graduate experience of alumni, which in turn can encourage the giving behavior of alumni.

Design/Methodology: A survey was conducted among alumni of 2 different technical institutions in and around Delhi NCR, India. The data was collected from 109 respondents through a self-constructed questionnaire based on a five-point Likert-type scale. The reliability of the questionnaire was computed to have a Cronbach's α of 0.84.

Findings: The key findings of the research show a significant positive relationship between alumni satisfaction and willingness for social giving behavior towards alma mater ($r= 0.348$; $p \leq 0.01$). Working professionals were not found to be satisfied with the overall educational experience at their alma mater. This low level of satisfaction can be accounted to the preparation they received for pursuing further studies at another college/institution and also to the preparation they received at their alma mater for their current employment.

Research Limitations: First, findings of this study cannot be generalized since it has been conducted within a sample of 109 only. The study can be done with bigger sample size and also including various other variables such as infrastructural facilities, faculty support, etc. Second, the sample were all IT working professionals, further research can include alumni from other disciplines also such as management, sciences, etc.

Originality: This paper studies the level of satisfaction of working professionals and its relationship with the social giving behavior of alumni. So far there have been many studies in West about the giving behavior of alumni which has focussed on the financial aspect only. Till date there has been no study to assess the feelings of alumni towards their alma mater in India. Indeed, this paper is an initiative in the direction of studying the relationship alumni share with their alma mater.

Abstract

This paper analyses the relationship shared between working professional and their alma mater. Alumni are the primary representative of the institution in the outside world. These days' public as well as private colleges and universities depend upon their alumni for financial and social support so, it becomes imperative to study and examine the level of satisfaction and giving behavior of working professionals with their alma mater which will help to formulate a framework for the institution to improve their relations with the alumni and enhance giving behavior of alumni. This study has been conducted in Delhi/NCR region among alumni of public as well as private institutions offering technical education.

Keywords: alumni, alma mater, technical institution, satisfaction, giving behavior, India

1. Introduction

According to Taylor and Massey (1996), "Alumni are a unique, select and continuing source of support that is one of the most valuable resources any institution has". As former students and internal stakeholders of the university, the alumni come to represent its external stakeholders upon graduation: as clients (if they continue with postgraduate and further education courses at the same university, or if they take advantage of its expert and research services, as beneficiaries), as suppliers (if they can provide professional services in support of the alma mater), as collaborators (on research projects or other areas), as partners (in various actions), as sponsors or donors for some of the university's activities, as volunteers, consultants, or even competitors

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(if they will set-up a competing university), etc. Of all the categories of human resources in a university, we think that alumni, in spite of its major potential, it is the least capitalised (refer figure 1).

In the past, institutions have had no concrete incentives to keep systematic track of alumni. It is not uncommon to hear of institutions that are still without records of all graduates or even information on the current addresses of living graduates. Private institutions and smaller schools in general are ahead of public institutions, especially the large ones, in tracking their graduates. At the other end of the spectrum, many community colleges have only recently joined in the pursuit of their alumni.

2. Literature Review

Alumni satisfaction is not a significant predictor of willingness to give, but also has an indirect effect through alumni involvement. Measures of obligation to give did not achieve significance, along with preferences to give to other educational institutions or charitable causes, earning a degree at other educational institutions, transferring, subsequent attendance at a top-tier institution, loan aid, and other demographic variables (Hoyt, 2004).

Gaier (2005) found that there were significant increases in both alumni giving and alumni participation based on the level of alumni satisfaction with the undergraduate academic experience. As alumni satisfaction increased so did the odds of alumni giving and alumni participation. Thus alumni who are satisfied with their academic experience are more likely to be involved (i.e., give and/or participate) with the university than those alumni who are not as satisfied with their academic experience. The most significant variables associated with alumni giving were the academic variables that emphasized academic work (e.g. "coursework in major"). The most significant academic variables linked with alumni participation emphasized interpersonal relationships and interactions (e.g. "relationship with faculty and staff").

According to Monks (2003), the most significant determinant of alumni giving levels is the individual's satisfaction with his or her undergraduate experience. Respondents who reported that they are "very satisfied" with their undergraduate experience gave over 2.6 times as much to their alma mater as graduates who were "ambivalent," "generally dissatisfied," or "very dissatisfied." Similarly, graduates who were "generally satisfied" gave over 1.8 times as much to their alma mater.

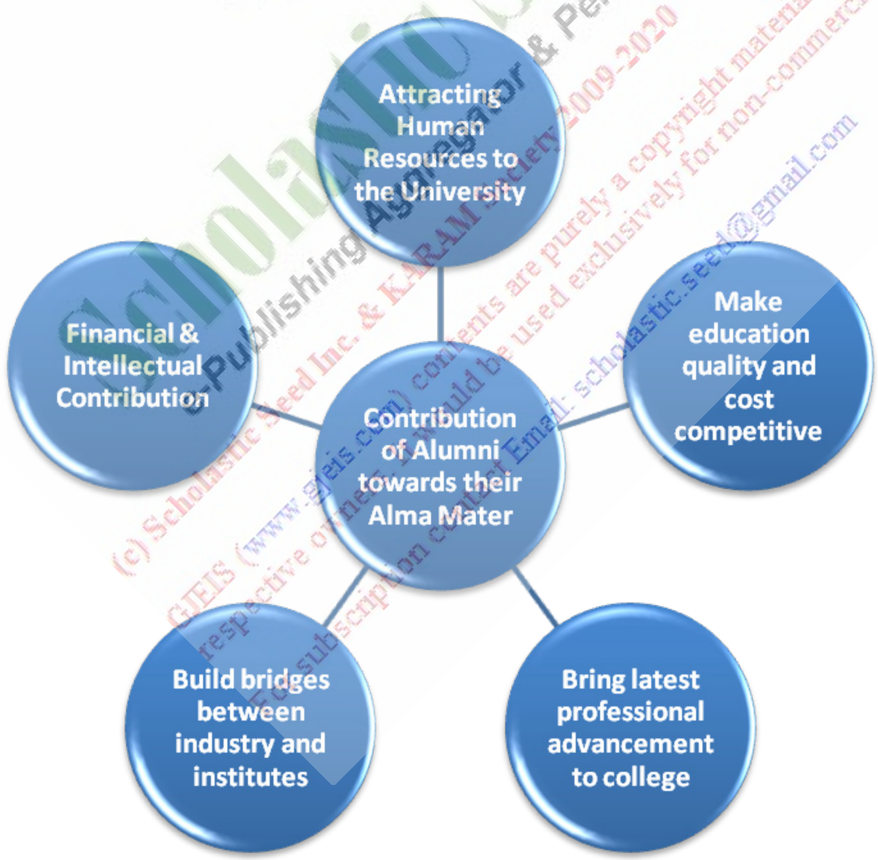

Figure 1. Contribution of alumni towards their alma mater.

Hartman and Schmidt (1995) applied consumer satisfaction framework for investigation the student/alumni satisfaction. They found that student/-alumni satisfaction is dependent upon the degree of goal development that a student has for a particular aspect of education which in turn is based on institutional performance.

Alumni involvement and financial support are related to the emotional attachment and satisfaction of alumni with their alma mater. Research indicates that this attachment is often tied with the undergraduate experience. According to Johnson and Eckel (1997), developing active alumni begins during the educational experience. Alumni who were involved in campus activities gained a higher emotional attachment to the university (Baade & Sundberg, 1993). According to Johnson and Eckel (1997), "The experiences of students while enrolled are strongly coupled to their later feelings about the institution. Graduates who had a rewarding undergraduate experience may feel more connected to their alma mater, become more involved, and contribute financially when able" (p. 229).

The most significant attitudinal variable associated with alumni association membership was alumni association perceptions. Greater levels of satisfaction with the alumni association are more likely to be members of alumni association. Graduates who were more involved with both university and alumni association events and programs were more likely to be members (Newman & Petrosko, 2011).

The student leaders may be more likely to give back to the university for many number of reasons. They may be more satisfied with their alma mater because they received honors or were able to have special opportunities that led to greater positive feelings and fonder memories than the average student. This higher level of satisfaction with their experiences might explain an increase in their motivation to give (Thomas & Smart, 2005).

An institution's alumni giving rate does not adequately measure graduates' satisfaction with their educational experience. Unfortunately, alumni giving has become a handy proxy that really only measures an institution's success at generating philanthropic dollars.

3. State of Affairs in India

Manjula Pooja Shroff, an entrepreneur and academician by profession, through an article shared that Indian universities are largely funded by tuition fees, whereas western universities are mostly funded by donation. For instance, only about 20% of Harvard expenditures are met by tuition fee collections while nearly 50% comes from donation. A signification amount of this donation comes from its alumni base.

Indians industrialists including Siddharth Yog, Anand Mahindra, Narayana Murthy, Ratan Tata, etc. continues to donate to western universities. It is not that donation to Indian universities is completely non-existent, but it is quite bleak compared to the amounts donated to foreign universities. Nandan Nilekani's donation of $2.6 million to IIT, his alma mater, to build a new hostel wing is often spoken about.

According to Prof. B. M. Naik, Founder & Principal of SGSSIT (Nanded), "Indian institutes do not stand high in the world list mainly because they have not yet fully harnessed the creativity of alumni for uplifting institutional performance. Alumni are important stakeholders of college."

3.1 IIT Madras

As a step towards streamlining the alumni funding, the IIT Growth Fund was set up in January 2005 for deployment of generated funds towards infrastructure, research projects and scholarships in the institute. The eminent communication technologist-cum-entrepreneur and second richest Indian billionaire in the United States, Gururaj 'Desh' Deshpande and his wife Jaishree Deshpande, both illustrious products off the institution, built the Sharavathi Hostel block for the girl students. The four stories hostel accommodates over 400 girls today.

3.2 IIT Roorkee

Global Meet 2005 brought two milestones for its Alma Mater. One professorial chair worth Rupees 1 crore to IIT Roorkee from NEEPCO for advancement in the power sector studies and secondly a world class exposure on Broadband Technologies to IIT Roorkee students by Alcatel. '*Distinguished Alumni Award*' was instituted in the year 2001 with the conversion of University of Roorkee into IIT Roorkee to honour the progenitors of this institute who are excellence-at-par in varied fields and have contributed immensely for the promulgation of the interests of their country and Alma Mater.

3.3 Objectives

- To study the relationship between IT working professionals and their alma mater.
- To analyse the satisfaction level of IT working professionals with their alma mater.
- To examine the relationship between satisfaction level and giving behavior of IT working professionals with their alma mater.

3.4 Hypothesis

$H_0$1: There is no significant difference between male and female alumni with regard to satisfaction with their alma mater.

$H_0$1a: There is no significant difference between male and female alumni with regard to satisfaction with overall educational experience at their alma mater.

$H_0$1b: There is no significant difference between male and female alumni with regard to satisfaction with the efforts of alma mater to maintain contact with alumni after their graduation.

$H_0$1c: There is no significant difference between male and female alumni with regard to satisfaction with opportunities provided by their alma mater to work with current students and new graduates to help them be more successful.

$H_0$1d: There is no significant difference between male and female alumni with regard to satisfaction with the participation in activities to help alma mater's students and new graduates to help them be more successful.

$H_0$1e: There is no significant difference between male and female alumni with regard to satisfaction with opportunities provided by their alma mater to make suggestions about how to improve program and services.

$H_0$1f: There is no significant difference between male and female alumni with regard to satisfaction with preparation received at their alma mater for further study at another college or university.

$H_0$1g: There is no significant difference between male and female alumni with regard to satisfaction with preparation received at their alma mater for employment in the concerned field.

$H_0$2: There is significant and positive correlation between satisfaction and willingness for social giving of alumni of technical institutions.

4. Research Methodology

This paper attempts at answering the research questions through Literature review as well as administering survey questionnaire. Based on literature review study, a 19-item questionnaire was developed. The questionnaire had three parts, part a was purely focused on collecting demographic details, part b contained questions pertaining to satisfaction level of alumni with their alma mater regarding their overall educational experience; preparation received by them was excellent for their field of employment or for further studies; if alma mater has tried maintaining contact with them after their graduation; etc. and part c focussed on assessing the social giving behavior of alumni.

The questions were rated on Likert scale of five points ranging from 1 to 5 with 5 being the highest level of response (strongly agree) and 1 being the lowest (strongly disagree). Reliability of the questionnaire was tested to be Cronbach Alpha 0.84. According to Nunnally (1978, p. 245) the instruments used in basic research have reliability of about .70 or better.

Data was collected from two management institutions of Delhi/NCR-one private and other public institutions offering technical education. Survey was conducted during the alumni meet of the respective institutions. Out of 120 solicited participation numbers, total usable forms received were 109, signifying a response rate of 90%.

5. Data Analysis

The first section of the questionnaire collected the demographic information of the respondents such gender, age, employment status, year of graduation, etc. followed by items relating to alumni satisfaction.

6. Demographics

Among the respondents around 80% were male and rest were female working professionals. 99 working professionals were aged less than 33 years. Almost all working professionals have pursued full-time course at their alma mater.

7. Discussion

The analysis of the data indicates that a majority of the respondents have participated in the activities to help the students (including currently studying and fresh graduates) to be more successful (m = 3.36, s.d. = 0.94). On the level of satisfaction with respect to the opportunities being provided by alma mater to their alumni for giving suggestions about improvement of program and services being offered by the institution, majority of the respondents were found to satisfied (m = 3.51, s.d. = 1.02). Similar response was received for the opportunities being provided by alma mater to their alumni for working with current as well as fresh graduates for making them for successful (m = 3.51, s.d. = 0.98). Working professionals were found to be just satisfied with the efforts of their alma mater regarding the maintenance of contact with them (m = 3.28, s.d. = 1.05).

Level of satisfaction was below average with respect to the preparation the working professionals received at their alma mater either for further studies at other college or institution (m = 2.90, s.d. = 0.88) or for employment in their respective fields (m = 2.59, s.d. = 0.93). Working professionals were not very satisfied with the overall educational experience of at their alma mater (m = 2.39, s.d. = 0.98) (table 1).

Table 1. Satisfaction level of working professionals with their alma mater

Items	N	Min.	Max.	Mean	Std. Dev.
Level of satisfaction with overall educational experience at my alma mater	109	1	5	2.39	0.98
Level of satisfaction with the efforts of alma mater to maintain contact with alumni after their graduation	109	1	5	3.28	1.05
Level of satisfaction with opportunities provided by alma mater to alumni to work with current students and new graduates to help them be more successful	109	1	5	3.51	0.98
Level of satisfaction of alumni with the participation in activities to help alma mater's students and new graduates to help them be more successful	109	1	5	3.36	0.94
Level of satisfaction with opportunities provided by alma mater to alumni to make suggestions about how to improve program and services	109	1	5	3.51	1.02
Level of satisfaction with preparation received by alumni at their alma mater for further study at another college or university	109	1	5	2.90	0.88
Level of satisfaction with preparation received by alumni at their alma mater for employment in the concerned field	109	1	5	2.59	0.93

No significant difference was found between male and female respondents with respect to overall educational experience they had at their alma mater ($t = 1.035$, $p < 0.05$), opportunities provided to them by their alma mater to work with current students and new graduates to help them be more successful ($t = 0.928$, $p < 0.05$) and also for opportunities provided by their alma mater make suggestions about how to improve program and services ($t = 1.315$, $p < 0.05$). In view of the same, hypotheses $H_0$1a, $H_0$1c and $H_0$1e were accepted.

However, it was found that a significant difference exists in satisfaction level between male and female alumni with respect to the efforts of alma mater to maintain contact with them after their graduation. Male alumni were found to be more satisfied in the said parameter ($t = -1.995$, $m = 2.64$, $p < 0.05$). The reason could be that as compared to female, males are always more approachable. Female alumni also do not share their details on which they can be contacted. Therefore, male alumni are more reachable by alma mater as compared to female alumni. Hypothesis $H_0$1b was rejected.

Same reflected in respect of the participation in activities to help alma mater's students and new graduates to help them be more successful, male alumni were found to be more satisfied ($t = -1.588$, $m = 2.45$, $p < 0.05$). Usually sometime after graduating, females get married and with family responsibilities on their shoulder, do not have much time to invest for such activities. As a result, male alumni indulge more in such activities resulting in higher level of satisfaction. Hypothesis $H_0$1d was rejected.

Contrasting results were found with respect to the satisfaction level with regard to the preparation received by alumni at their alma mater for further study at another college or university ($t = 2.159$, $m = 3.90$, $p < 0.01$) and also for employment in the concerned field ($t = 2.928$, $m = 3.86$, $p < 0.01$), female alumni were found to be more satisfied. The results concur with findings of Martin, Milne-Home, Barrett, Spalding, and Jones (2000), where females had reported greater satisfaction in employment preparation received at their alma mater. Females were found to be more satisfied with college than males (Pace, 1979 as mentioned in Pike, 1994).

Pike (1994) through his research found that work experiences were significantly related to alumni ratings of their college experiences. Specifically, alumni who were satisfied with their jobs are more likely to report being satisfied with their education experiences. The results of his research indicated that females were less satisfied with their pay than males. Compared to males, females were neither more dissatisfied with the types of work they were performing nor more likely to be looking for another job. Counter to expectation, dissatisfaction with pay had a more significant effect on ratings of college experiences for female alumni than for male alumni.

Whereas our findings suggest that female alumni were comparatively more satisfied with the preparation received at their alma mater for employment in concerned field. This can be attributed to the accommodating as well as emotional nature of females, wherein they are try to adjust to the opportunities being provided to them. It is also pertinent to mention that females easily form an emotional bond with their surroundings (including their alma mater). Therefore, hypotheses $H_0$1f and $H_0$1g were also rejected (table 2).

For the purpose of testing null- hypothesis and its sub-hypothesis that there exists a significant difference between male and female alumni with regard to level of satisfaction with their alma mater, Levene's t-test for equality of variances has been applied (table 3).

Table 2. Difference in level of satisfaction of male and female alumni

Items	Gender	N	Mean	Std. Deviation	Std. Error Mean
Level of satisfaction with overall educational experience at my alma mater	1	22	2.9091	0.75018	0.15994
	2	87	2.7126	0.80562	0.08637
Level of satisfaction with the efforts of alma mater to maintain contact with alumni after their graduation	1	22	2.2273	0.61193	0.13046
	2	87	2.6437	0.92732	0.09942
Level of satisfaction with opportunities provided by alma mater to alumni to work with current students and new graduates to help them be more successful	1	22	2.8182	0.79501	0.1695
	2	87	2.6322	0.85065	0.0912
Level of satisfaction of alumni with the participation in activities to help alma mater's students and new graduates to help them be more successful	1	22	2.0909	0.68376	0.14578
	2	87	2.4598	1.0321	0.11065
Level of satisfaction with opportunities provided by alma mater to alumni to make suggestions about how to improve program and services	1	22	3.5455	0.9625	0.20521
	2	87	3.2184	1.06121	0.11377
Level of satisfaction with preparation received by alumni at their alma mater for further study at another college or university	1	22	3.9091	0.68376	0.14578
	2	87	3.4138	1.01788	0.10913
Level of satisfaction with preparation received by alumni at their alma mater for employment in the concerned field	1	22	3.8636	0.6396	0.13636
	2	87	3.2299	0.96088	0.10302

where, 1= female and 2= male

Table 3. Difference in level of satisfaction of male and female alumni

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Level of satisfaction with overall educational experience at my alma mater	Equal variances assumed	0.395	0.531	1.035	107	0.303	0.19645	0.18973
	Equal variances not assumed			1.081	34.322	0.287	0.19645	0.18177
Level of satisfaction with the efforts of alma mater to maintain contact with alumni after their graduation	Equal variances assumed	8.466	0.004	−1.995	107	0.049	−0.4164	0.20868
	Equal variances not assumed			−2.539	48.48	0.014	−0.4164	0.16403
Level of satisfaction with opportunities provided by alma mater to alumni to work with current students and new graduates to help them be more successful	Equal variances assumed	1.34	0.25	0.928	107	0.356	0.186	0.20046
	Equal variances not assumed			0.966	34.219	0.341	0.186	0.19247
Level of satisfaction of alumni with the participation in activities to help alma mater's students and new graduates to help them be more successful	Equal variances assumed	6.291	0.014	−1.588	107	0.115	−0.3689	0.23234
	Equal variances not assumed			−2.015	48.257	0.049	−0.3689	0.18302
Level of satisfaction with opportunities provided by alma mater to alumni to make suggestions about how to improve program and services	Equal variances assumed	0.119	0.731	1.315	107	0.191	0.32706	0.2488
	Equal variances not assumed			1.394	35.086	0.172	0.32706	0.23464
Level of satisfaction with preparation received by alumni at their alma mater for further study at another college or university	Equal variances assumed	9.601	0.002	2.159	107	0.033	0.4953	0.22945
	Equal variances not assumed			2.72	47.489	0.009	0.4953	0.1821
Level of satisfaction with preparation received by alumni at their alma mater for employment in the concerned field	Equal variances assumed	8.028	0.006	2.928	107	0.004	0.63375	0.21641
	Equal variances not assumed			3.708	47.993	0.001	0.63375	0.1709

To determine whether there is a relationship between the satisfaction level and willingness for social giving behavior of alumni towards their alma mater, the Pearson moment correlation was used. The results show that there is a positive significant relationship between the two variables ($r = 0.348$; $p \leq 0.01$) (table 4). Whereas Wunnave and Lauze (2001) found that among the consistent financial donors, alumni of working in finance sector had the highest level of financial giving followed by occasional donors who work in personal service sector such hotel/restaurant. It appears that the sector in which alumni have an impact of their giving behavior because it impacts the financial status of the individual. Also the kind of work profile being taken by alumni influences the time schedule of the individual which he/she can offer to the alma mater. Hence, $H_0 2$ is accepted.

Table 4. Correlation between alumni satisfaction and willingness for social giving to alma mater

		Alumni Satisfaction	Willingness for social giving to alma mater
Alumni Satisfaction	Pearson Correlation	1	.348**
	Sig. (2-tailed)		.000
	N	109	109
Willingness for social giving to alma mater	Pearson Correlation	.348**	1
	Sig. (2-tailed)	.000	
	N	109	109

8. Conclusion

Alumni are vital to institutions of higher education. Whether they are volunteering their time on committees, participating at campus events, or giving financially, they are crucial to the survival of the institution. Alumni serve as ambassadors for the university to their communities and states. Visible alumni success (CEO's, corporate Vice-presidents, etc.) in their careers are often determining factors in recruiting other students to the university (Lawley, 2008).

Therefore, it is alma mater's need as well as responsibility to improve upon the relationship shared between the institution and alumni. In our study, working professionals were majorly satisfied with the opportunities being provided to them both for working with current students as well as fresh graduates and also giving suggestions for improving the services & programs offered by the alma mater.

But working professionals were not found to be satisfied with the overall educational experience at their alma mater. Based on this study, this low level of satisfaction can be accounted to the preparation they received for pursuing further studies at another college/ institution and also to the preparation they received at their alma mater for their current employment. The dissatisfaction of working professionals with their current employment can be a reason for lower rating of the preparation received at their alma mater.

No significant difference was found between male and female respondents with respect to overall educational experience they had at their alma mater, opportunities provided to them by their alma mater to work with current students and new graduates to help them be more successful and also for opportunities provided by their alma mater make suggestions about how to improve program and services.

In contrast, male alumni were found to be more satisfied with respect to the efforts of alma mater to maintain contact with them after their graduation and participation in activities to help alma mater's students and new graduates to help them be more successful. Whereas female alumni were found to be more satisfied with regard to the preparation received at their alma mater for further study at another college or university and also for employment in the concerned field.

We found a significant positive relationship while assessing the relationship between alumni satisfaction level and their willingness for social giving behavior towards their alma mater. Thus, implying that level of satisfaction influences the giving behavior of alumni. Therefore, alma mater can enhance the giving behavior of alumni by improving their under-graduation experience which in turn will improve their level of satisfaction.

9. Limitations

Despite the researcher's all efforts, this study too has few limitations. First, findings of this study cannot be generalized since it has been conducted within a sample of 109 only. The study can be done with bigger sample size and also including various other variables such as infrastructural facilities, faculty support, etc. Second, the sample were all IT working professionals, further research can include alumni from other disciplines also such as management, sciences, etc.

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Trends of Retailing in E-Commerce – Product and Services

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Abstract

Today's retail market is going down and the new changes in the market searching for a significant shift in its development and the way the investment is done. Current players and emerging players are looking for new retail format. The current attractive pattern is Electronic retailing which is on a fast progress development. Internet access to the customer's changing and huge process is developing and also the peddlers take note and consumer right to make your design and traditional value approach you need to make. All the above increase of current attempts to paper:

E-commerce retail business's current description of tilt-in Indian conditions and services and discussed the worldwide electronic commerce current inclination.

Describe Indian conditions electronic retail sales in regards to customers at the time of purchase due to their attitude.

Research Design: Gathered secondary data for research study for the purposes of e-commerce in retail business products and services. With the help of secondary resources observation data is collected.

Keywords: e-retailing, e-tailers, C2C, internet, electronic commerce, electronic money, B2C, B2B

1. Introduction

All over the world for different reasons organizations are moving to electronic commerce. In E-commerce, many of the working conditions with work automation allows the minimum operating costs, by this time and creates organizations to cut costs, all processes are secured through data encryption. It is easy to communicate and trade globally as the cost of transmission is very less and affordable due to e-commerce. Electronic market system/mechanism, many sellers knowledge and the exchange of data relating to products or services are connected to each other, e-commerce mechanisms naturally arises incentives. Digital information systems and communication technology usage in electronic commerce makes trade activities and possible action.

E-commerce has changed the transaction abstraction and arrival but not physically but electronically, many of the ideas tangible in trades activities are conducted in the way can be sent across the Internet. Electronic commerce relates with buying and selling of services or goods between the individuals, business, government, households and other private or public organizations. Of any order or receipt an Internet or electronic transaction does that is not regulated by way of the distribution medium.

2. What is Internet?

The Internet operates as a network that logically linked to each other from all over the world through stand alone computer, independent computer networks and devices (such as routers, switches, software) in a system. The Internet has ability to collect, share, process it and Internet-driven manipulation of information in real time over the network (and to do so cost effectively) and thus the business use internet to do so. The development of new Internet products has opened opportunities for development:

- Electronic money
- Internet banking
- Electronic retailing (online trading)

3. Electronic Money

Payments by electronic money[1] (Welling & Rickman, 1998) are attractive to buyers and sellers as they can be exchanged over a network, take negligible time, and work equally well for transactions of a few cents and a few billion dollars (Peha & Strauss, 1997).

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There are three basic categories of electronic money:

1. An account-based notational system that uses conventional financial institutions and the transactions are recorded (for example, credit card payments on the Internet, ATM and EFTPOS facilities (Forder, Quirk, & Akindemowo, 2003)[3]. Issuer maintains an audit trail of transactions.
2. Traditional banking infrastructure can work out which banknotes and coins, to offer an alternative by small value retail payments made to a stored value facilitates tokenised system. Card-based products such as traditional currency, cheques and credit and debit cards are payment instruments for traditional retail options and they are intended to supplement. The card contains a chip that automatically deducts the purchase from the card and transfers it to the trader. For example, In India 'Gift Card' is a non-bank electronic cash card used to purchase gifts and make single purchases.
3. Software-based electronic cash is accumulated as a computer code on a plastic card or on the hard drive of a computer system.

4. E-Commerce around the World—Regional Round-up

Consumers all around the world shop online, but what they're buying and how they use product reviews and social media to influence their decisions vary widely.

Figure 1 shows that in the year 2002 the percentage growth is 30% in comparison with year 2001 when the growth of e-commerce was 24%. This percentage growth rate vary every year and it drastically fell down in year 2008-2009 from 30% in 2001–02 to 1.88% in 2008–09 (Internet Retailer)

As per figure 2 online retail sales is growing every year. We can see that it is $27 Billion in 2000 and continuously growing every year to $134 Billion in year 2009, thus online retail sales grew with an average of 20% each year (Internet Retailer).

Figure 3 mentions that Electronic commerce is growing by 27 percent a year in Asia region; 29 Percent in US region and by 34 percent in Europe region in Global e-commerce sales as per data available in year 2010 and only 10 percent is covered by rest of the world (Internet Retailer).

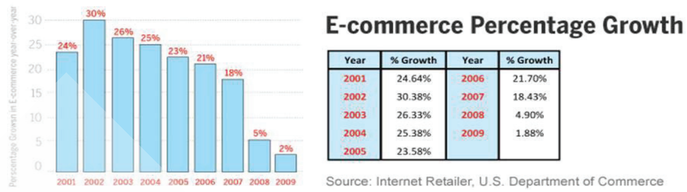

Figure 1. Notable e-Commerce-related Statistics – E-Commerce percentage Growth in United States - From 2001–2009

Figure 2. Notable e-Commerce-related Statistics – Online Retail Sales Growth from 2001–2009

Figure 3. Notable e-Commerce-related Statistics – global e-commerce sales growth percentage by region in year 2010

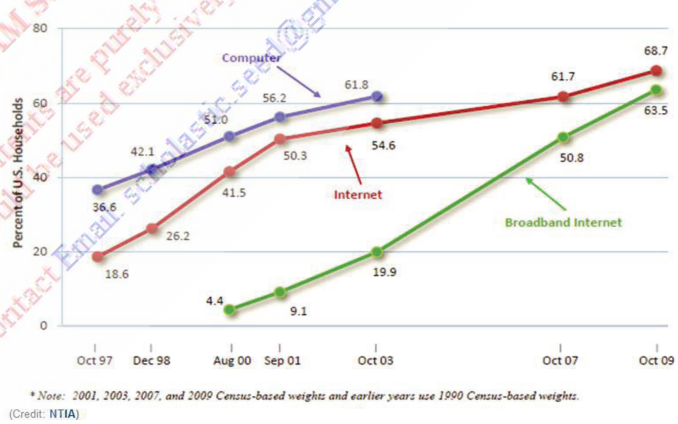

Figure 4. Notable e-Commerce-related Statistics – percentage of Households with computers and Internet connections, for 1997–2009

[1] *Electronic money is also called e-money, e-cash or electronic cash, digital cash, digital currency, digital money and cyber payments.*

[3] *An ATM (Automated Teller Machine) is an unattended terminal-type device that provides simple banking services such as cash withdrawals, transfer of funds between accounts and account balances at locations other than counters staffed by tellers in financial institutions. In an EFTPOS (electronic funds transfer at point of sale) transaction, funds are transferred electronically at a payment terminal within the premises of a trader.*

5. Electronic Retailing Trends in India

In Indian society e-commerce has became an indispensable part of our daily lives. A large amount of goods and services are provided by many websites. There are those with specific services in e-commerce today provide certain branded products, which are also very important part in Indian culture/society and it became an important part of our daily lives. A large number of products and services are provided by many sites. It also combined to provide a particular product with many sites. Multi product e-commerce, these Indian e-commerce websites provide goods and services in vast/huge categories. To name a few: books and magazines, computers and peripheral, auto, men and women, software, real consumer electronics, health and beauty products, home appliances, jewellery, audio/video, entertainment, accessories, gift articles, apparel and accessories and services.

As we can see in figure 5 that usage of Ecommerce is mainly used for online Travel globally this is 80% of total Ecommerce Market Share in year 2010.

India purchasing online is electronic retailing or e-retailing as indicated and it is increasing day by day in India. Last House in many research studies the process slow and users have been thwarted, but now things are changing and the number of online users excellent e-tailing becomes supplementary to the Internet through massive purchases that are mentioned.

Sankarson Banerjee, Chief Executive Officer of the market of the future (future group of Chase enterprises) said: "in the future market of goods in FY09 120 crores, future group sold 1.5 percent of total sales. This year we are hoping it will be more. Worldwide, it's the contribution of 7–10 percent of sales".

According to a report released on September 2010, consumers spend appreciable amount of time researching about products before making acquisition. Of course, users are conscious about shopping through E-tailing but a number of them are coming back, thanks to huge discounts & deals retailers' offer to their online clients.

In 2008, the Internet and Mobile Association of India (IAMAI) stated that the e-commerce industry stood at Rs. 9,210 crore. Now, it is expected that e-commerce will grow 30% yearly. Travel portals are contributing 75–80% of the market contribution - the rest is made up by e-tailing, online classified, and digital downloads. Online classifieds such as matrimonial and job portals is constituted by 12% of the market.

6. Trends in Indian Online Shopping

- In the coming year, at least eighty out of hundred Indian consumers, this means nearly 80% of Indian consumers will make online buying.
- At present, more than one-fourth users acknowledge that they spend nearly 11% of their monthly income as shopping expenditure on procuring online.
- Almost 70% of Indians trust recommendations from family members while making an online purchase selection. 64% trust recommendations from friends and 29% trust online product reviews.

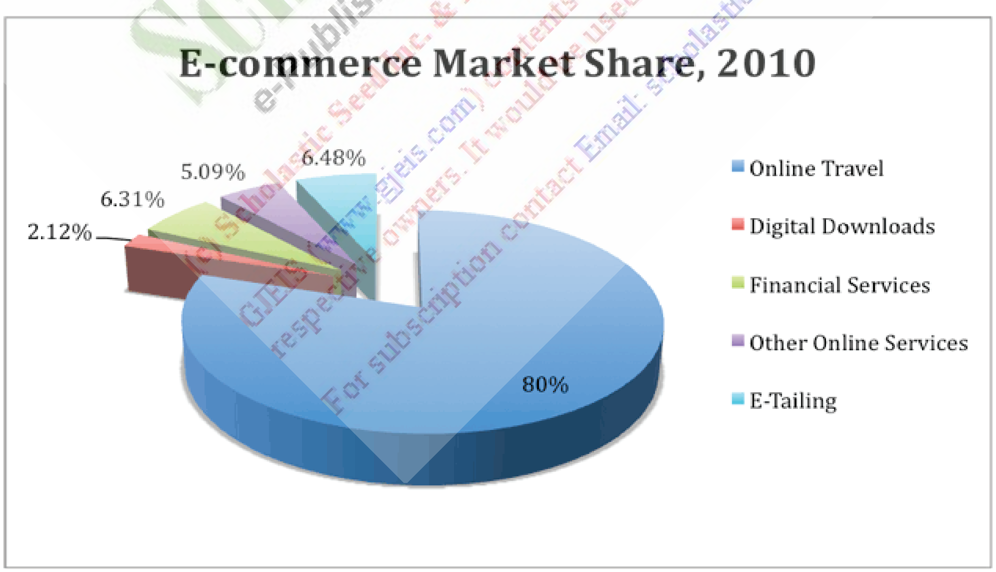

Figure 5. E-Commerce Market Share percentage in 2010

- Among Indian consumers nearly 50% consumers use and trust social media sites to make online purchase.
- Indian users rely heavily on online reviews and opinions while buying Electronics, software and other items (such as motor bikes).
- More than forty in Hundred Indians are likely to share (post a review) a negative experience of product or service online than those who share a positive experience.
- In future, nearly 41% buyers will purchase books, 40% buys airline tickets, and 36% buys electronic equipment such as TV, Cameras online.
- It is observed that while shopping online, maximum buyers usually shop from sites that allow them to select goods from many distinct shops.

7. A Promising Future for E-Tailing

In India, online shopping for retailers is gaining recognition as it leads to much assistance for them. Some of benefits include:

- No costs of real estate
- Intensify customer service
- Throng customisation
- Can reach Globally
- Specialised stores and cranny marketing

In future, E-tailing (online retailing) in India will intensify even further. However, long term existence and sustainability directly depends on factors like innovations by market players and also market changes. Electronic retailing in India has a promising growth due to increased infiltration of credit cards and easy access of digital facilities to a wider community. However, Negotiation-hunting consumers are not comfortable on this trend as E-retailers are known to offer products at special prices with huge discount as compared to physical retailers.

As per figure 6 Indian user transacting is growing every year. We can see that it was 3 Million in 2007 and continuously growing every year to 9 million in year 2010 which is almost 3times, the compound annual growth rate as estimated is around 36% from 2011–2015.

8. Electronic Commerce Services

Electronic commerce services as compared with the brick and mortar retail stores, e-commerce services are varied and diverse. E-commerce options include payment services and transportation for customers and business options and promote management for traders. For customer support, e-commerce payment options are normally better than offline purchase options. In addition to debit card and credit card payments, cash on delivery, e-commerce often accept transfer money from online payment system. These systems accept safely deposit and quick, safe, and easy payment processing online to be able to buy goods and services. Link to the product or service on their sites and other services provided through benefits online can offer free payment system processing.

E-commerce offers a payments option which is not readily available in retail stores is a deferred payment options and payment options. E-commerce services sometimes gives option to buy now and payment can be done later with a small fee payment options. The buyer agrees to the terms and pays for the agreed date in future and allows using of a credit or debit card number

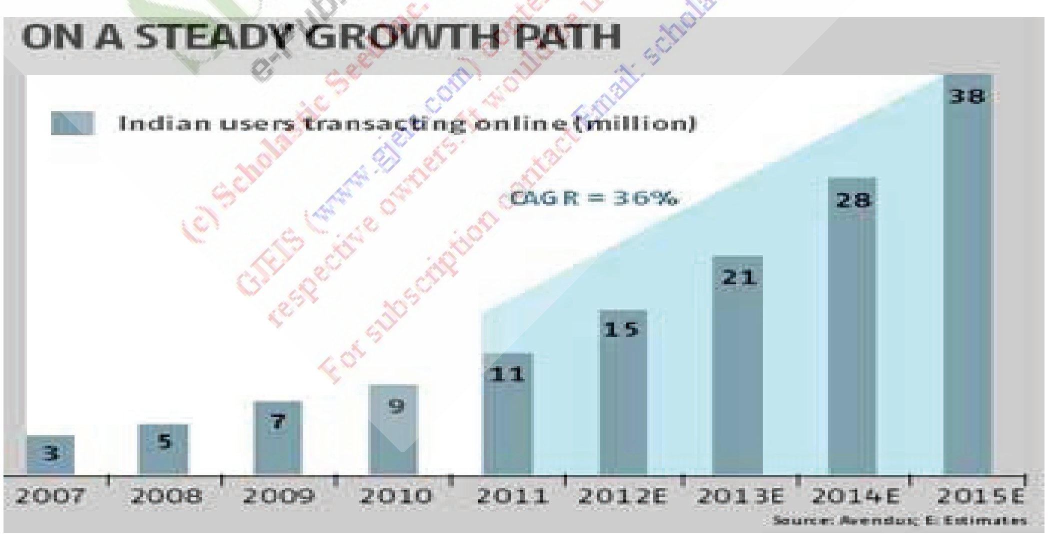

Figure 6. Usage of E-Commerce by Indian Users from 2007- 2015 (estimated in Millions)

or bank account information. Security and customer confidence is essential to gain a sense of security; most e-commerce websites do such for contact information, credit card details, bank account numbers and addresses as customers assure the security of personal data. Third-party data provided to the Organization's goes for encryption and provides these services. This encoding is there to prevent identity theft and privacy attacks.

In addition to secure payment option, retailers try to provide regularly usage of the easy site options and normally change their minds during the shopping process which helps the retailer to make customer's feel that they are highest priority for retailers. E-commerce services normally for selection of order quantity, color, style, and size, as well as checking and transport or shipping options of any product keeps one click Change options.

Retailers can also use e-commerce services to upgrade website development and solutions for complications, and can keep consumer choice to do so. These options of inventory tracking, cross-selling and shipping to customers, orders and notifications, are done to keep customers satisfied after purchasing any goods or services through e-tailing. It can also be done through automatic notifications and by suggesting additional products or services to the customers. Key features of e-tailing usually make a website linked to find a search feature and provide price/brand names within specific product comparison sites. These options are usually provided by dealers or website to create a viable retail unit webmaster using shopping cart software as part of the offer.

9. Best Type of E-commerce Product

E-commerce means online buying and selling. E-commerce product that depends on weird business and consumer base is the best type of e-commerce product. Like every other business, e-commerce companies have affordable and reasonable price what they want to offer their consumers. Consumers often can get better prices in online stores in comparison to a normal retail stores prices, the e-commerce industry often make this possible because of low overhead costs associated with e-tailers to do so. E-commerce products are the best type to attract customers and generate good revenue for e-tailers.

Keeping online customer wishes it is necessary to select the perfect e-commerce products and services to sell. Many e-commerce organizations on online purchase provide free shipping as an incentive for ordering through e-tailing. Online ordering products have the advantage over regular in-store shopping as that it is more convenient to customers as they need not have to leave the comfort of your own home. The most successful e-commerce website provides clear online product e-catalogue as well as a simple command format. Shopping cart software permits online consumers by clicking only on computer mouse if they want to buy particular products.

Once clicked, the selected item (s) that customer wants to buy go to a list known as shopping cart. Prices appear after this so that online consumer can quickly know the amount to be paid. A simple and intuitive ordering process should be a big part of e-commerce to support for offering good quality products. Unique products of each company with or without brand name and which are not competitive in price are usually good to sell online.

It's difficult for e-commerce organisations to do thorough research on their competitive. Larger organizations sell products in both ways in order to compete in the market and in terms of general revenue which is practically not possible for small e-commerce business to do. Finding market demand and supply the best products through a simple, clear, safe and secure website operating system is the best mechanism for small organizations which contributes to the operating model through an e-commerce product line.

As we can see in figure 7 people purchase many things few of them, what sells well on the Internet? are as mentioned below:

10. What sells well on the Internet?

- Computer hardware and software
- Consumer electronics
- Office supplies
- Sporting goods
- Books and music
- Toys
- Health and beauty
- Apparel and clothing
- Jewellery
- Cars
- Services
- Others

Figure 7. Products which people prefers to purchase online

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11. Electronic Retailing

The electronic retailing (e-Tailing) is the perception or approach to sell retail products & services using digital/electronic media, in particular, the internet. E-retailing is synonymous with business-to- consumer (B2C) transaction model of e-commerce. Although electronic retailing is an autonomous trading model with certain specific concerns like; electronic transaction process, trust model etc, but in reality it is a part of e-commerce by nature.

Electronic retailing or e-tailing can include business-to-consumer and business-to-business sales. E-tailers are not dependent solely to the Internet; some brick-and-mortar businesses also operate through websites to reach customers. Online retailing in general is referred to as e-tailing. Revenue in E-tailing can be calculated from the sale of goods and services, through contribution to website content, or by advertisement.

The importance of electronic retailing is growing globally. Like e-Bay shopping and Rediff shopping, some e-retailers are building a platform for retailers to sell their products online and they do not take the responsibility of delivering the product to the buyer. They provide virtual shopping space for retailers. On the other hand, brands like Amazon, Wal-Mart and Flip Kart, keep stock products to their own warehouse and take the responsibility of distributing the products to the buyer. They have their own physical infrastructure and they can capture pockets of additional customer as follows, many of the brick and mortar stores are entering into electronic retailing. All major retailers are working through the online store and some online work. For example, Dell Company sells its products online through dell.com.

Electronic Retailing is developing by 29% CAGR in India, as per Euro-monitor report the CAGR is 48%. The report also forecast that the addition of electronic retailing is likely to be 46% till 2010 in comparison to non-store retailing.

12. E-Retailing Benefits Both Consumers and Marketers

E-retailing works in order to provide the right product with the right message to the right person and thus is a powerful marketing technique. But what makes the right combination? Why consumers shop online or react to TV offers? The short answer is the consumer benefits. It is to consumer's advantage to do so and so people respond to electronic retailing messages. It's their practical or psychological need which is addressed by this. Electronic retailing, TV or on the Internet, is all about motivation. How do you do something to someone so that wither he/she pick up the phone or log on to a Web site and then make a purchase? Customers consider their value or because it makes them look better about self or feel better they use electronic retailing operation to buy a product or service. Consumers cannot investigate individual products and it may take four to six weeks to get the product through online shopping, still they do so.

13. E-Commerce Business Models

E-Commerce is a huge domain through which we conduct business through internet and electronic retailing is factor of it. When we review on digital/Internet facilitates, trading activities between corporations and individual persons using current network technologies and as per the strategies of the corporation it takes the form of e-business. At the moment, 'E' is developing and becoming part of most of our work and everything is getting digitally enabled. So, it is very necessary to precisely explain distinct forms of business or commerce commonly called as Electronic Commerce.

Types of E-Commerce models

As mentioned in figure 8 there are mainly three models of E-Commerce and they are B2B, B2C and C2C. Further E-Commerce Business models are explained below:

13.1 Business to Business (B2B)

This model is the biggest form of electronic commerce contributing trade revenue of millions of dollars. In this type, the customers and e-tailers are both trading/business entities and do not associate with any single customer. It is like the producer catering products to the agents, merchants or vendors. E.g. Flip kart shopping is an online store, which sells popular branded products to consumer, where its supply chain is directly linked to producers.

13.2 Business to Consumer (B2C)

This model includes customers as purchasers and corporations as trading houses. This is the prevalent model in electronic commerce. In this form, E-tailers (online vendors) trade with specific/ultimate customers. When B2C initiated, it was a small part in the market after 1995 its growth was exponential. This business model helps customers to make quick decisions on the Web business home, photo and Flash animation and compare similar products with other products with detailed information about all products which are listed in categories that will be available on e-commerce website. For example-An online Music website selling CD's/DVD's and streaming audio/video on the web. For Example- www.imusic.com

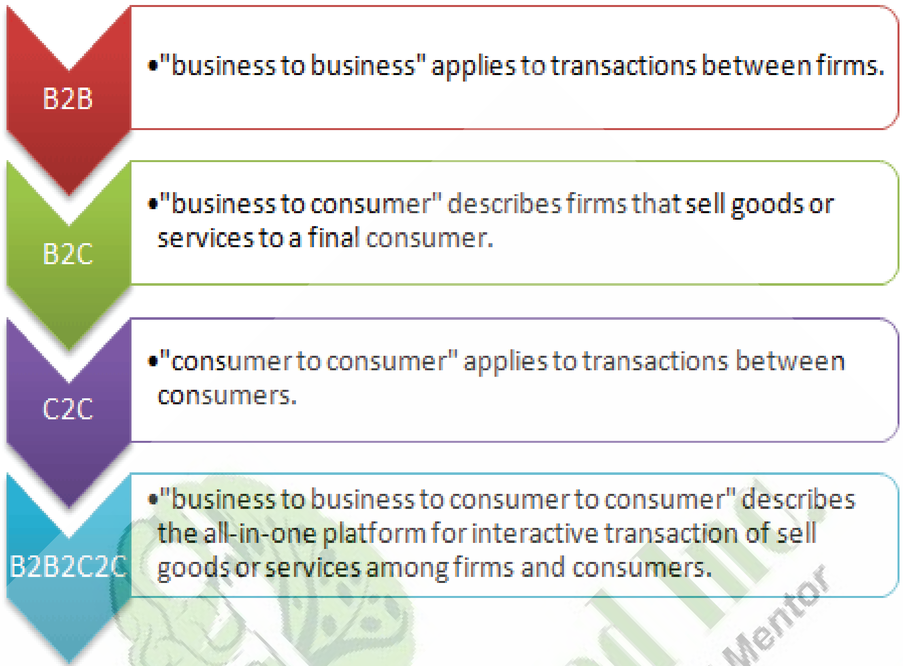

Figure 8. Types of E-Commerce models

13.3 Consumer to Consumer (C2C)

Olx Inc. is a suitable illustration for this model as an auction website where a customer can sell their ancient or old used items at discounted price to interested consumers, rest of the consumers who are all interested in those items can bid for that. This auction happens for a time period and then ends; now the highest bidder can make payment and purchase the product. Here Olx plays a role of facilitating platform where consumer to consumer transactions takes place.

13.4 Consumer-to-Business (C2B)

Consumer-to-business (C2B) is that model where an ultimate customer makes a product or service and provides to a corporation for business process or to get competing benefits. C2B model finally predicts that produced goods and services are from customers and not similar to the traditional business-to-consumer (B-2-C) model, as it totally changes that concept.

13.5 M-Commerce

M-commerce now a day's helping people to do all trade officials/ financial transactions without going to the Bank physically. Example: As due to e-commerce consumer mobile is provided new technology of mobile banking through which anyone in this world can access their own banks facilities (for instance, HDFC Bank iMobile) i.e., pay insurance premiums, utility bills, telephone bills, income taxes, etc. In addition to this regular online stores are also trying to make a consumers shop through their mobile devices in order to optimize user interface design for their site viz., IPad, iPhone, Android phones, and Microsoft enable Windows Mobile 6.x devices.

There are some more forms of e-commerce business models like G2B (Government to Business), B2E (Business to Employee) and G2C (Government to Citizen) but actually all these are same as to the above discussed models. However, it is not compulsory that these types are followed in all the E-Commerce forms. It depends whether business is adopting some of the forms or only one of them or if possible all of them is adopted as per its requirements.

14. Conclusion

In India and in the worlds other countries –e-tailing (product and services online shopping) is having a fruitful future. Online shopping in India and other countries towards perception is getting better. With the use of the Internet, consumers, with easy and secure payment options can do anything and can shop anytime. Consumer can do comparison between shopping through electronic retailing and regular store. The Internet has changed

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many aspects of life. Even though in regular stores we can touch the products and see them physically before shopping, but still it cannot beat the comfort of online shopping. A travel ticket booking or gig/singing (show) and some services like buy tickets online, have the ability to process much easier and are more than enough.

The dotcom/dot net bubble bursting is not as easy as it sounds too many companies as doing business on the Internet is not so simple as we predicts. Of course, to reach any part of the world is easy now, the power of the Internet has increased international trade and the global economy holds the potential to increase electronic retailing. However, just as every coin has other side; it is also doing business on the Internet risks and legal issues associated with it that has been observed. It now is affecting e-commerce on a global scale that approach to a social, cultural and economic conversion that is allowed and accepted by community. E-commerce is a new economic and social milestone. It is now acknowledged by society that electronic commerce is financial, cultural and social conversion approach that is affecting globally. E-commerce has built a new economic and social landmark.

With the rapid development of Internet e-commerce online business are clearly suitable to support emerging electronic payment systems (EPSs). An open challenge for novel Internet-based payment systems to meet users' expectations, needs, priorities and requirements in the exploitation of the design and payment systems for developers. Failure to meet the final result in denial Pay them less usable, insecurity and the inability of the system to even customers refuse to use such systems.

Finally, we can conclude that an electronic retailing is not only about creating a website. It's a procedure with an established management consulting firms that check profit revenue models, to determine the skills needed for business planning and electronic commerce initiative and also integrates supply chain processes with electronic retailing initiatives. The role of the Government for e-commerce products and services in either domestic and/or international business are allowed to develop their approach in order to provide a statutory structure for e-commerce, intellectual property, fraud, privacy and security as the primary rights are with all development not only in India but all over the world. Nevertheless, with the rapid expansion of the Internet e-commerce in the 21st century electronic retailing is playing a very important role and will open up new opportunities which will be accessible for both small companies and large corporations.

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Using Serendipity for ICT Development

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Abstract

In today's global marketplace, characterized by the ever-increasing pace of competition, ever-increasing & changing demands of customers, and explosion of knowledge and technology, all organizations require creative out-of-the-box thinkers and approaches for survival and growth. It is indeed survival of fittest and fastest these days. Better & faster idea generation holds the key to long term survival and growth of the organization. Organizations use variety of techniques for stimulating creativity and generating new ideas. While traditional creativity techniques do not focus on using accidental discovery for tapping new ideas, these days serendipity i.e. accidental discovery is also being explored by organizations like Yahoo & Google etc for generating new ideas.

This paper highlights the importance of serendipity for idea generation and its contribution for ICT development. The paper explores the challenges likely to be faced in using serendipity for idea generation. Finally the paper suggests a framework for meeting such challenges for harnessing the potential of serendipity for idea generation.

Keywords: serendipity, creativity, organization, idea, ICT

1. Introduction

> *"Creativity is seeing what everybody else has seen but thinking what nobody else has thought" – Albert Szent-Györgyi*

Technology develops through a process of Creativity, Invention and Innovation. Creativity/Creative thinking/Inventive thinking is thinking up new things. According to Oxford English Dictionary–Creativity means - to use/involve one's own thought or imagination to create something new as work of art, an invention. According to Boden (1998), there are three main types of creativity, involving different ways of generating the novel ideas:

a. The 'combinational' creativity that involves new combinations of familiar ideas.
b. The 'exploratory' creativity that involves the generation of new ideas by the exploration of concepts.
c. The 'transformational' creativity that involves transformation of some dimension of the structure, so that new structures can be generated.

Creative thinking plays an enabling role in innovation. According to European Commission Report (1998), "Creativity and innovation are normally complementary activities, since creativity generates the basis of innovation, which, in its development, raises difficulties that must be solved once again; with creativity… It is not possible to conceive innovation without creative ideas, as these are the starting points."

In the present era, which is characterized by ever-increasing pace of competition, ever-increasing & changing demands of customers, and explosion of knowledge and technology, all entities need creative out-of-the-box thinkers and approaches. In a survey of 1500 Chief Executive Officers conducted by IBM in the Global CEO 2010 study, it was found that CEOs believe successfully navigating in an increasingly complex world requires creativity.

According to Khurana (2007), In fact, creativity plays a significant role in the growth and long-term survival of an organization. To cite few examples: Initial use of computer was for data processing, now it is used in almost all activities viz. CAD, CAM, FMS, e-CRM, e-SCM; Shift from manual accounting system to ICT based system in banking sector viz. ATMs & Credit Cards; Online trading, Online shopping etc.

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Similarly creativity can contribute significantly towards national growth by finding newer ways of solving macroeconomic and social problems, by finding better ways of macroeconomic and social management. To cite few examples: Using ICTs for e-governance; Replacement of manual ballot voting system by electronic voting machines in the elections; Running mass transport system like Tube in UK or Delhi Metro (DMRC) in India by using ICTs etc. There are numerous such examples, where creative solutions have been used for improvement of macroeconomic and social management.

While traditional creativity techniques do not focus on accidental discovery for tapping new ideas, these days serendipity i.e. accidental discovery is also being explored for generating new ideas.

2. About Serendipity

In the English language, the word 'serendipity' was first used by Horace Walpole, the Earl of Oxford (1717–1797). In his letter dated 28 January 1754 addressed to Horace Mann, he mentioned that he created it from the children's Persian fairy tale, "The Three Princes of Serendip," whose heroes were always making discoveries, by accidents and sagacity, of things they were not in quest of. Thus the word was derived from Serendip, an old name for the island nation of Sri Lanka (Ceylon).

'Serendipity' is commonly used in reference to 'the happy accident' (Ferguson, 1999; Khan, 1999), the finding of things without seeking them (Austin, 2003), and as synonymous with 'any pleasant surprise' (Tolson, 2004), fortuity, chance, randomness, or luck. The New Oxford Dictionary of English defines it as "the occurrence and development of events by chance in a happy or beneficial way." It also defines chance as any event happening in the absence of any obvious design (randomly or accidentally), one that is irrelevant to any present need, or one of which the cause is unknown.

Thus Serendipity means a happy accident or pleasant surprise; a fortunate mistake; specifically the accident of finding something good or useful while not specifically searching for it.

As per Walpole, serendipity is a process by which a discovery is made. This process has two necessary elements: chance and sagacity. Sagacity is the mental discernment or the cognitive capacity that is necessary to recognize that an observation has an important meaning. While conducting experiments on a particular topic, multiple researchers may observe a common accidental event that is significant to understanding some phenomenon. While one researcher may perceive the significance of the event, another researcher may not. The former makes a discovery by serendipity. Thus sagacity makes the difference between a serendipitous discovery and a non-discovery in the presence of important accidental information.

The term Serendipity has been used as a sociological method in Strauss and Glaser's (1990) Grounded Theory who built on ideas put forth by sociologist Merton, (1949) in his Social Theory and Social Structure (1949) referred to the 'serendipity pattern' as the fairly common experience of observing an unanticipated, anomalous and strategic datum which becomes the stepping stone for developing a new theory or for extending an existing theory.

Nonaka, (1991) points out that the serendipitous quality of innovation is highly recognized by the Japanese managers and he links the success of Japanese enterprises to their managers' ability to create knowledge not by processing information but rather by tapping the tacit and often highly subjective insights, intuitions, and hunches of individual employees and making those insights available for testing and use by the enterprise as a whole.

M. E. Graebner describes serendipitous value in the context of the acquisition of a business as "windfalls that were not anticipated by the buyer prior to the deal," i.e. unexpected advantages or benefits realised due to positive synergy effects of the merger.

Serendipity is a key concept in competitive intelligence used as one of the tools for avoiding blind spots (Blindspots analysis).

3. Typology of Serendipity

The study of various case studies on serendipity provides meaningful insights about typology of serendipity. When it came to the discovery of polymerase chain reaction (PCR) and DNA, researchers found what they were looking for but by way of chance. By contrast, in the discoveries of sildenafil citrate (Viagra) and penicillin, researchers discovered something different from what they were looking for. The former can be labelled as 'pseudo-serendipity' (Roberts, 1989), also known as 'serendipity analogues' (Diaz de Chumaceiro & Yaber, 1995). In these cases, the objective remained unchanged, but the route towards achieving this objective proved unusual and surprising. By contrast, the latter can be labelled as 'true serendipity', or 'serendipity proper' (Diaz de Chumaceiro et al., 1995), as there was a change in the objectives as a result of the discovery process.

A further distinction can be made between chance as the unintended consequence of research design, and chance as pure random variation. Serendipity can also come about as the unintended consequence of innovation, where products are discovered to have uses other than those for which they were originally designed. Well-known examples include aspirin, intended as an anti-inflammatory but widely used as a preventative measure against heart attacks, and minoxidil, developed to treat high-blood pressure but prescribed against hair loss.

In the sildenafil citrate and PCR examples, opportunities arose as a direct consequence of the way the study was designed i.e. the unintended consequence is causally related to the research design process. The unintended side-effects of sildenafil citrate appeared precisely because Phase 1 clinical trials generally used healthy male volunteers (rather than females); the idea of PCR relied entirely on Mullis' imaginative efforts at recombining a set of existing technologies. Mullis (2000) acknowledged that there was not a single unknown in the scheme and every step involved had been done already. Mullis' sagacity resided not in seeing what no one else had seen before, but in thinking what no one else had yet thought of.

By contrast, the discoveries of penicillin and DNA benefited from random chance occurrences; the spore in Fleming's dish had most likely wafted in from the mycology labs located one floor down. Fleming was sagacious to construct a meaningful connection between two random occurrences and observations made by others before him. Similarly Crick was fortunate to share his office with a crystallographer (an advantage not shared by Wilkins and Franklin) and thus was able to make serendipitous discovery. Either event was causally unrelated to any research design – i.e. a-causal.

Thus serendipity can happen following ways:

- Serendipity by way of random variation (A-causal): Penicillin
- Serendipity as the unintended consequence of research design (causal): Sildenafil citrate
- Pseudo-serendipity by way of random variation (A-causal): DNA
- Pseudo-serendipity as the unintended consequence of research design (causal): PCR

The typology of serendipity is shown in figure 1 below.

Intention		Causal	A-causal
	Pseudo-Serendipity $A \rightarrow A$	*PCR*	*DNA*
	Serendipity $A \rightarrow B$	*Sildenafil citrate*	*Penicillin*
		Relationship	

Figure 1. Typology of Serendipity
Source: *De Rond, M (2005), "The Structure of Serendipity," WP 07/2005, University of Cambridge, UKFigure 1*

4. Role of Serendipity in ICT Development

According to Kahn Bob (2011), Serendipity will significantly alter the future of ICTs and internet in coming years. Coping with serendipity is a major challenge for all the participants in the ICT sector as it will throw up sudden and new challenges.

These days, the Silicon Valley is obsessed with serendipity, which was also the reigning buzzword at Southwest Interactive Festival of January 2013. When Yahoo banned its employees from working from home in February 2013, it gave the following reason that some of the best decisions and insights come from hallway and cafeteria discussions, meeting new people, and impromptu team meetings. Thus the message is clear that doing the best work solo cannot compete with lingering around the coffee machine waiting for an inspiration - in the form of a colleague - to strike.

In the same month, Google provided details of its new campus in Mountain View, California. In this new campus, buildings resembling bent rectangles have been designed, such that no employees in the complex will be more than a two and-a-half-minute walk away from one another. The underlying idea is to maximize casual collisions of the work force. Rooftop cafes will offer additional opportunities for close encounters. The Google is encouraging large social interactions amongst employees, because in the past the idea & concept development of projects like Gmail, Google News and Street View took place while the software engineers were having fortuitous conversations at lunch.

The approach of Yahoo and Google clearly suggest that serendipity is largely a by-product of social networks. Close-knit teams do well at tackling the challenges in front of them, but they lack the connections to spot complementary ideas elsewhere in the organization. Bonabeau (1999) reasons that our world is becoming so complex that it cannot be comprehended by any single human-being alone. According to Gloor (2006), Swarm intelligence offers an alternative way of designing intelligent systems in which autonomy, emergence, and the ability to distribute tasks replace control, pre-programming, and centralization. While swarm intelligence is based on equal sharing of information, swarm creativity is founded on sharing ideas openly. People come at the projects from different backgrounds and they can add more facts, figures, concepts, ideas and vision to a particular project than what a standalone individual will be able to do. Their occupation, where they were born, what their background is, what their education is, are they a crafter or a business person, these dimensions can significantly influence the vision, mission, plans and their execution by bringing different viewpoints and various talents to the projects. It's another variant is Collective Intelligence which involves pooling of the aggregated knowledge, insight and expertise of a diverse group for generating new ideas, solving old problems, disaggregating and distributing work in new and innovative ways, and making better, more informed decisions about the future. Foster and Ford (2003) also emphasize that serendipity was widely experienced amongst inter-disciplinary researchers, where it was categorised by reinforcing an existing problem, taking the researcher in a new direction, or by the location of the information: known valued information in an unexpected location, or unexpected finding of information that also proved to be of unexpected value.

In the 1960s, Allen, Thomas J (MIT), observed that colleagues who are out of sight are frequently out of mind. According to him, we are four times more likely to communicate regularly with someone sitting 6 feet away from us as compared to someone sitting 60 feet away, and almost never with colleagues working in separate buildings or floors. Whenever we meet individuals in person, we get a particular intellectual charge by sharing of ideas.

The University of Chicago sociologist, Burt (2004) calls these organizational distances/gaps as "structural holes." In a 2004 study of 673 managers at the defence contractor Raytheon, Burt found that managers who serendipitously bridged such gaps were more likely to generate good ideas and make more progress professionally. In such cases, serendipity is the spontaneous plugging of these holes, over which good ideas flow. As per him, this is not creativity born out of genius; rather it is creativity as an import-export business.

In 2012, researchers at Arizona State University used sensors and surveys to study creativity within teams. Participants felt most creative on days that were spent in motion meeting people, not working for long stretches at their desks. Thus the impact of social interaction on stimulating serendipity & creativity is summarized in figure 2.

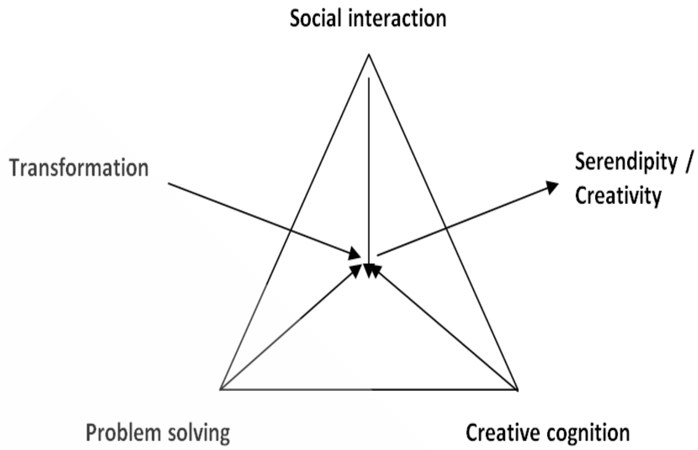

Figure 2. Using social interaction for stimulating serendipity

Source: *Adapted from Wheeler S, Waite S J and Bromfield C (2002), "Promoting Creative Thinking through the Use of ICT," Journal of Computer Assisted Learning*

5. Challenges in using Serendipity

In the 1930s, Rossman, pointed out that many stories have been told of accidental discoveries and inventions. However, a careful study of these stories will reveal the fact that lucky accidents only happen to those who deserve them. Thus there is the need for an individual to be 'sagacious' enough to link together apparently innocuous facts in order to come to a valuable conclusion.

The Serendipity has been defined as a happy accident etc. This happy accident may occur today, tomorrow, in next one year and may be after decades. Thus timeframe of occurrence of happy accident is uncertain and could be very long.

According to Makri and Blandford (2010), the notion of 'designing for planned serendipity' by engineering it into a system is an oxymoron. Organizations can merely design tools, create conducive conditions and opportunities through which higher chances of early and more occurrence of happy accidents can be realized.

So as to ensure early and larger occurrence of happy accidents, organizations like Yahoo & Google have started pursuing 'Planned Serendipity,' in addition to other creativity techniques.

Planned Serendipity is complimentary to collaboration rather than a collection of how-to-do tips. It aims to capture the voices of the explorers who bear witness to the power of ideas, the possibility of change, and the uncharted territory in our midst. Planned Serendipity is very complex exercise and difficult to attain. Its success depends upon variety of factors like organizational culture, support of leadership, level of trust in the organization, attitude of employees etc.

Studies have shown time and again that organizational culture is more critical source of business success or failure than the organizational strategy and leadership. It does not mean that strategy does not matter; rather a particular strategy which an organization employs will succeed only if it is supported by the appropriate cultural attributes. A study by Booz and Company (2011) shows that the ways R&D managers and corporate decision-makers think about their new products and service—and how they feel about intangibles such as risk, creativity, openness, and collaboration - are highly critical for success. Organizations saddled with both poor goal alignment and poor cultural supports perform at a much lower level than well-aligned companies. On the other hand, organizations whose strategic goals are clear, and whose cultures strongly support those goals, possess a huge advantage.

Most successful organizations concede the difficulty of maintaining the cultures that led to their success. According to Palensky (3M), it is very difficult to build and sustain good organization culture as it is built up a brick at a time, a point at a time, over large number of years. If it is not nurtured properly, then it can be lost very quickly.

Some problems are associated with the Top Management. Autocratic functioning of the top management, lack of respect for individual initiatives, intolerance for honest mistakes, etc adversely affect degree of the Serendipity & creativity in the organization. Some CEOs may not be willing to give flexibility or may be risk-averse by nature. Sometimes there are over-expectations from the CEO when he/she may be perceived to be solely responsible for technology development and other senior managers may not participate adequately in technology development. Another problems is that of managing in the light of corporate restructuring & transient senior management. Whenever some senior leader leaves the organization, its innovative culture is adversely affected. For example, after the departure of Mr Steve Jobs, performance of Apple has somwhat stagnated.

Another important problem is that of trust and the attitude of employees, who bring it to their organizations based on their prior experiences. Our education system emphasizes individual accomplishment and learning in a highly competitive environment. Students, who outperform others, get higher grades and ranks. Thus the desire to dominate over others gets embedded into our mental framework from childhood itself. Once these former competitors are employed by the organizations, they find themselves in a similar environment of competition. In the organizations, they are required to compete with their co-workers for more important, prestigious and higher salaried positions. They quickly discover the fact that personal knowledge and information is power, and that if they wish to advance their careers it is probably better to keep the information with them. Thus the employees are usually not keen to openly share their views & opinions fearing that credit for their ideas may be taken over by others.

Not only does the competitiveness of the employees add to an environment of mistrust, the organization itself, through its actions, adds to the level of mistrust. This is partly due to the nature of a free market economy in which the organization is continuously required to defend itself from its competitorsbytakingvarietyofaggressivemeasuresincludingcost-cutting measures. Some organizations try to maximize short term profits by ignoring ethical considerations, corporate governance and corporate social responsibility. Some organizations are frequently found to pursue downsizing. All such actions contribute to employees' mistrust of their employers. As a result, employees often put their own personal career goals way ahead of the needs of their company. This is reflected in the large staff turnover that many organizations experience. The lack of trust operates in both directions. Because of the difficulty in retaining staff, organizations many times create and exacerbate, a vicious cycle of mistrust by not investing enough in the training and professional development of employees. The lack of trust, endemic in the culture of most organizations, is a great obstacle to harnessing full potential of planned serendipity.

Thus a variety of factors can affect the degree of usage of serendipity for technology development.

6. Managing the Challenges

Serendipity is routinely but mistakenly used as synonymous with chance events, luck or providence. The fact is that serendipity remains comparatively under-researched. Recently a £1.82m project – Seren A: Chance Encounters in the Space of Ideas, has been funded by the Engineering and Physical Science Research Council (EPSRC) of UK. Few similar projects are also underway. The key challenge is ... how can one unlock the 'black box' of chance? Rather than being synonymous with chance, serendipity results from identifying 'matching pairs' of events that are put to practical or strategic use. Thus serendipity implies a capability, not an event. It is the human agency, and not the probability, which should be the proper focus of attention. According to Louis Pasteur, "Chance favours the prepared mind." Thus appropriate education and training needs to be given to employees to develop sagacity capability to capture ideas from happenings around them. New ideas can be inspired by anything, anytime, anywhere. Employees need to have their "idea antennae" up at all times and they should be always on the lookout for bits and pieces of inspiration that can be used for serendipitous discovery.

Erdelez (1999) found that people were able and willing to discuss experiences of serendipity, or - bumping into information, during discussion. She found that the following elements are useful in understanding such an experience:

- the information user who encounters the information – ranging from on-encounterers to super-encounterers;
- the characteristics of the information encountered – both problem-related and interest-related;
- the characteristics of the information needs that the encountered information addresses – either a current, past, or future need;
- the environment where the information encountering occurred – from libraries, bus stops, to the Internet.

A right supportive environment is needed for stimulating serendipity & creativity. According to Higgins (1999), factors for encouraging the creative work climate are:

- A secure environment with minimal administrative interference.
- An organisational culture that makes it attractive and easy for people to discover and solve problems.
- Rewards for employee performance and enhancement of intrinsic motivation.
- Managerial willingness to take risks for creativity and innovation, as well as an open and flexible attitude on the part of management.
- Providing people with formal and informal training.

A variety of strategies and steps can be used by the organizations to harness serendipity and creativity. Some of these are discussed below:

According to Leach (2001) the social dimension of creativity has been largely ignored by traditional accounts of creativity. Organizations need to develop Collaborative Innovation Networks (COINs) to encourage social interaction, whereby knowledge workers can collaborate and share in internal transparency. In a COIN, they can communicate directly rather than through hierarchies. They can innovate and work toward common goals in self-organization instead of being ordered to do so. COINs are becoming the most productive engines of innovation ever. COINs have produced some of the most revolutionary drivers of change of the Internet age, such as the World Wide Web and Linux. The structure of a COIN may appear chaotic, like a bee or ant colony, but it is immensely productive because each team member knows conceptually what he or she needs to do. Organizations can successfully promote COINs by giving up central control in favour of self-organization in swarm creativity, developing an ethical code, and setting up a social network connected by hubs of trust.

For speeding up serendipity, Organizations should provide strong integration & orchestration of cross functional activities. Organizations should encourage movement and combination of people from different perspectives to allow for creative combinations. Communication systems should be continuously improved to cope up with changing business requirements. Cross functional teams can play a great role in integration. This will also ensure better communication across different functions.

Organizations should pursue non-linear, open and flexible innovation process with continuous interaction with customers, business partners and employees for attaining success. Organizations also need to focus on collaboration with customers so as to meet their needs.

Organizations need to nurture appropriate culture and improve it continuously to meet the ever-changing requirements of business environment. According to Mr Palensky (3M), so as to develop and sustain a conducive organizational culture, organizations need to show consistency & persistence in actions and ethics; and the Management should extend gentle, behind-the-scene encouragement to innovative culture.

According to KPMG 2012 study, the CEO is not the only one responsible for innovation leadership. Only 29 percent of respondents believe that the CEO is solely responsible for spearheading organizational innovations. This is despite the contribution of the great business leaders like Jobs, Gates and Ma, who imagined and then churned out continually new and improved products and breakthroughs to give their organizations a competitive edge. At the top a team should be put in place under a team leader so that if some person leaves the organization, then others can take the innovative culture forward. This way capability can be developed to manage in the light of frequent corporate restructuring & transient senior management.

Exceptional productivity is concentrated among a few people. Organization should employ, develop and retain exceptionally talented inventors. Combining the right people with an appropriate innovation process could lead to a 5–10 times productivity improvement. Organization should seek maximum participation of all employees. Strategic organizational structures should be developed to engage the employees to the organization's benefit. Depending upon the nature and complexity of the project, organization can use variety of incentives and rewards for motivating employees and seeking their maximum participation.

According to Malone, (2004), for using planned serendipity, organization should hire and retain committed, smart, and aggressive people with requisite qualities. Getting the right personnel is the key driver to success. An organization with plenty of ideas will reach nowhere if it does not possess requisite talents to make things happen. The managers need to shift their thinking from command and control to coordinate and cultivate – as the best way to gain power is sometimes to give it away.

Thus by adopting variety of strategies and steps, challenges can be met; and planned serendipity can be harnessed on long term basis for technology development.

7. Conclusion

If the 1980s were about quality and the 1990s were about reengineering, then the 2000s are about velocity. The world is changing rapidly so are the world's businesses. It is indeed survival of fittest and fastest these days. Better & faster idea generation holds the key to long term survival and growth of the organization. Over reliance on traditional creativity techniques does not suffice today. As a result organizations like Yahoo & Google etc have started using Planned Serendipity for idea generation, in addition to traditional creativity techniques. It must be noted that notion of 'designing for planned serendipity' by engineering it into the system is an oxymoron. Organizations can merely design tools, create conducive conditions and opportunities through which higher chances of early and more occurrence of happy accidents can be realized. Organizations are using increased social interaction & social networks for speeding up serendipity. Planned Serendipity is very complex exercise and difficult to attain. Its success depends upon variety of factors like organizational culture, support of leadership, level of trust in the organization, attitude of employees etc. To harness larger potential of serendipity, organizations need to pursue variety of strategies and steps ... like.... nurture appropriate organizational culture, provide education and training to employees to develop sagacity capability, develop Collaborative Innovation Networks (COINs), strengthen social interaction, pursue non-linear, open and flexible innovation process with continuous interaction with customers, business partners and employees and so-on. Serendipity i.e. idea generation through happy accidents will significantly alter the future of ICTs and internet in coming years.

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Two Case Studies in Marketing to Environmentally Conscious Consumers: Marcal Vs. Ben & Jerry's

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With the green market growing at 29 percent per year, (Rubin, A., Personal communication April 4, 2012), many businesses are going after the high-disposable-income, highly loyal Green consumer. Yet other businesses may have taken steps to green their businesses, but fail to realize how much marketing "juice" that commitment can provide, how much loyalty and trust those steps can engender.

Interestingly, research by the Shelton Group, J. Ottman Consulting, and others show that many green businesses can benefit by turning their green features into superior benefits that can sway the non-green, or the non-committed green.

But to reach the deep greens is important as well. Traditional benefit-only or image-only messaging doesn't always work for this audience. They want to see both, a benefit to themselves, and a benefit to the world. If you can make it clear that you offer something that helps the consumer and helps the planet, those customers will flock to you. And if you can make them feel actively and genuinely involved, so much the better.

This article will explore two companies' efforts in this sector. The first was an early convert to green production and manufacturing, but very slow to convert this into a marketing strategy. The other has a 30+ year history of targeting the deep green customer as one of its primary market niches.

But before we look at the two specific companies, let's take a moment to get grounded in the types of message points that offer both the personal and planetary benefit that the deep green consumer seeks. Here are a few examples:

- "Because our facility is 80% solar (wind, hydro) powered, we keep coal pollution out of your lungs and lower the whole area's carbon footprint"
- "Working to achieve zero waste within two years—lengthening the lifespan of your landfill lasts longer and creating cool and useful life-enhancing products from the materials we used to throw away"
- "Using only recycled raw materials since 1970—not only to save you money, but because it's important to use the resources already extracted instead of mining new ore and scarring the earth"
- "Our non-toxic organic vegetable ink is fully biodegradable—because we know you don't want heavy metals and chemicals in your compost"

A marketing piece is also stronger if you can also compete on price, quality, and/or value:

- "This reusable furnace filter is not only greener than disposable filters, it shaves your oil bill by 8 percent"
- "Cut your water use by half…for pennies"
- "Say good-bye to the produce-spoils-too-fast problem—enjoy your garden harvest all year long with this simple food dehydrator"
- "Because we use renewable, comfortable bamboo flooring, you'll stay warmer in the winter and cooler in the summer"

But even if the products don't compete on dollar value, these Deep Green Cultural Creatives will often spend more than they have to, if they feel the extra dollars are going for something good, and if they feel a personal tug. Nongreen shoppers, however, will not be moved by appealing to a higher good.

However, the Deep Green group's lie detectors can be very sharp; in many cases, they've done the homework, and if they think a company is greenwashing, those marketing messages will be received with open hostility. Marketing a very un-green technology such as nuclear power using Green marketing messages will only create a backlash and get that company attack both on social media and in the mainstream press. Companies should only make claims they can verify are really green, and really accurate.

With that background, it's time to look at a couple of real-life examples.

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1. Case Study I: Marcal

Marcal is a household paper products company based in New Jersey and marketing within the Northeast United States. Founded as a family business in 1939, this company switched to recycled raw materials all the way back in 1950. However, it was only in the mid-2000s that the company began to call attention to this enormous marketing advantage—using the slogan, "Paper From Paper, Not From Trees."

In the early years of its journey with recycled paper, it is perhaps understandable that Marcal would refrain from calling attention to its initiative. After all, the culture of the 1950s and early 1960s in the United States (as expressed in television and magazine advertising) emphasized extreme sanitation, suburban culture, the housewife glowingly welcoming her husband home into a sparkling kitchen and gleaming house. The company may have been justifiably nervous about letting it be known that its toilet paper was made from other people's discarded junk mail. The lack of early disclosure may have started as a legitimate fear that people wouldn't buy household paper made of other people's castoffs, even if it was just their sterilized junk mail. In the conformist, status-conscious 1950s, recycled paper stock could well have been seen as a liability.

Yet, the first Earth Day was all the way back in 1970. Certainly by the mid-1970s, a strong - if small constituency for green living was developing. It had its own infrastructure, with natural food stores and restaurants, bicycle co-ops, publishers specializing in books and magazines on related topics, and a resurgent back-to-the-land movement showing up in rural communities a few hours distance from large cities.

When I ask my audiences for my "Making Green Sexy" talks, what year they think Marcal switched to recycled paper, most of the answers tend to fall between 1985 and 2005. Occasionally someone will guess a year in the 1970s, especially if I call the company a pioneer in using recycled stock.

Almost no one guesses the correct answer, or even the correct decade, without prompting. Because, for too long, Marcal kept its best marketing point hidden. Even though the company has been 100% recycled for more than 60 years, it has only been in the past decade that it started incorporating this vital message into its packaging—and only since 2009 that environmental branding has become the central focus of its message to consumers.

Marcal did not do any marketing about its long history of recycled products until the early 2000s—more than 30 years after that first Earth Day. Apparently, the company either did not perceive this characteristic as a marketing differentiation point, or did not understand how to harness the marketing advantage without alienating nongreen purchasers (including a large B2B customer base using Marcal in factories, public restrooms, etc.

Finally, following a bankruptcy in 2006, Marcal launched the Small Steps line of paper towels, napkins, and toilet paper in a 2009 rebranding focused specifically on the environmental attributes.

By this late date, consumer support far outweighed any residual consumer resistance. This line was introduced in April, 2009. By December, just eight months later, this regional brand was the top selling recycled household paper product line in the United States—surpassing at least one national brand that had been on the market for more than two decades.

The 2009 packaging has a large tree logo right in the center, with the words "Help Us Save 1 Million Trees." Immediately above, it says "A Small, Easy Step to a Greener Earth™," and underneath the tree logo, in red, "100% Premium Recycled Paper." Underneath is a list of both environmental and personal features, such as chlorine-free whitening and hypoallergenic properties. The slogan, "Saving Trees Since 1950" is also present, but small and hard to see.

A year later, in the spring of 2010, the message is even clearer. That incarnation of the package not only gives more prominence to "Saving Trees Since 1950," but devotes the entire right-hand third of the front panel to environmental messages. The top of that section is a huge recycling logo wrapped around the tree picture. Directly underneath that, in the same typeface and nearly as large as the brand name, "100% Premium Recycled."

Under that, the package proclaims, "You Can Help Save 1 Million Trees" (notice the personal involvement of the customer there). Below that, a list of six "environmental facts," and finally, this question: "What's in your paper products?"

It is worth speculating how much more toilet paper, napkins, tissues and paper towels the company would have sold if it had started bragging earlier. As the public first became aware of environmental concerns in the early 1970s, many consumers would likely have been thrilled to find a cost-competitive brand that was also very green.

2. Case Study II: Ben & Jerry's

Ben & Jerry's is a global brand with consistent market penetration across the United States and some availability in at least five other countries (Ben-Jerry's Homemade Inc.)

Its primary product is superpremium ice cream, and it was only the second brand in the category to achieve national distribution throughout the US. The company was founded in 1978 in a converted gas station by Ben Cohen and Jerry Greenfield—neither of whom had experience either running a business or making ice cream.

Although there are hundreds of superpremium ice cream makers in the United States, Ben & Jerry's is one of just two companies in the superpremium ice cream market with more than a few points of market share; Ben & Jerry's and Haagen-Dazs both typically have 40–45 percent of the market, leaving the remaining few percentage points to be divided among the many smaller brands (Levinson & Horowitz, 2010).

How did this upstart company that broke all the rules become so successful? Many leading voices, including this author, believe that the success of companies like Ben & Jerry's with social and environmental activism entrenched in their corporate DNA is due in significant part to that social and environmental commitment. It provides a significant competitive advantage and differentiates those companies from the rest of the pack. (Kane, 2010).

Unlike Marcal, Ben & Jerry's has been trumpeting its social and environmental responsibility from its very earliest days, and is widely considered a pioneer in the business social responsibility movement (Ben-Jerry's Homemade Inc.). Throughout its history, the company has frequently exhibited at and/or sponsored alternative energy festivals, partnered with charities to provide jobs to workers on the margin, and consistently presented its vision of a better world. When the company went public, the first chance to buy shares went to local residents. In 1985, Cohen and Greenfield set up a foundation to fund community projects with 7.5 percent of pretax profits. In 1991 and 1992, the company sponsored a nationwide tour of street performers who traveled in support of solar energy using a partially solar-powered bus (benjerry.com/company).

Social and environmental commitment remains a hallmark of the company even after its takeover by the European giant Unilever. In fact, under Unilever's ownership, it was certified as a B Corporation (Benefit Corporation in 2012—the first subsidiary of a publicly traded company to achieve this. (nonprofitquarterly.org) B Corporations are not legally bound to put profit ahead of all other values; on the contrary, they are bound to use its structure to achieve good in the world). In 2010, the company pledged to source exclusively with fairly traded ingredients, and is on track to achieve that ambitious goal, affecting hundreds of ingredients for its 58 flavors, by the end of 2013. Ben & Jerry's even credits Unilever's massive reach for making that transition possible. (justmeans.com)

Without using the term Triple Bottom Line, B & J's mission statement emphasizes the concept of equal weight to economic performance, social justice, and both product and environmental quality. Under the social heading is a commitment to "initiating innovative ways to improve the quality of life locally, nationally, and internationally."

Rather than use a specifically environmental heading, Ben & Jerry's environmental goals are included in the Product portion of the mission: "with a continued commitment to incorporating wholesome, natural ingredients and promoting business practices that respect the Earth and the Environment."

From my point of view as a marketing consultant, the environmental language is excessively vague. In many companies, this could look like greenwashing—but in B & J's case, the public is well aware of its environmental commitments. For decades, the company has been sponsoring alternative energy fairs, buying from local and/or sustainable farmers, and in general taking quite seriously the sustainability aspects of its mission.

Interestingly, the company is considerably more explicit in a fourth section of its Mission page: "Leading with Progressive Values in our Business." Two of the five bullets, plus the introductory paragraph, focus specifically on environmental concerns: sustainable, family-farm-based agriculture and minimizing waste. The other bullets focus on economic equality and peace.

Although few American corporations would be willing to sign off on this statement, the company is even willing to publicly articulate as its first bullet that the U. S. economic system has its perils:

Capitalism and the wealth it produces do not create opportunity for everyone equally. We recognize that the gap between the rich and the poor is wider than at any time since the 1920's. We strive to create economic opportunities for those who have been denied them and to advance new models of economic justice that are sustainable and replicable.

It's not just about the mission statement, either. Ben & Jerry's social and environmental responsibility messaging is consistent across all touchpoints. Go to the website, look at a package, view an ad—the message is pretty similar.

Examples: A package of Chocolate Macadamia describes it as a "flavor with a mission," and prominently displays the Fair Trade logo—something very important to anyone who has studied the use by many chocolate producers of child slaves. The Activism web pages feature five different environmental initiatives, including Earth-friendly freezers—and six initiatives under the Social section of the mission. A brochure describes the social mission of setting up scoop shops that employ the disadvantaged.

So…when was the last time you looked at the environmental messages you're creating, and how they could not only promote the change you want to see in the world, but also draw in customers who love you because of your values?

Marketing consultant and copywriter Shel Horowitz shows you how to "reach Green, socially conscious consumers with ethical marketing that has THEM calling YOU." An international speaker and writer of the monthly syndicated column, Green and Profitable, he covers Green messaging in far more detail in *his eighth book,* Guerrilla Marketing Goes Green: Winning Strategies to Improve Your Profits and Your Planet (*with Jay Conrad Levinson; John Wiley & Sons, 2010). His website is http://greenandprofitable.com.*

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Knowledge Management – The Key Driver for Growth

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Knowledge today is more comprehensive and complex than before. In the era of globalization changing technology requires adaptation at a breathtaking rate. Knowledge is ability of adaptation to changing condition and is now regarded as a most valuable and critical resource for creating sustainable competitive advantage. Thus paper states and explains the concept, background origin of knowledge as a driving force for today's organisation.

Knowledge management is a new branch of management for achieving breakthrough in business performance through the synergy of people, process and technology. Its focus is on the management of change, uncertainty and complexity.

The paper highlights the issues about knowledge management which acts like a key force in a business organisation. If a knowledge management is properly maintained and integrated, it can act as a source of power for the business organisation because of its dynamic nature. With this tool, organisation can achieve developmental results, increase organizational flexibility, can create desire and motivation among workforce and can also help in talent retention, the major concern of organisation today.

"In tomorrow's business environment, knowledge and how it is managed for competitive advantage will be the number one corporate priority."

– James J. Schiro, CEO, PricewaterhouseCoopers

1. Introduction

The key to change and growth is awareness, sharing ideas and coming up with new and innovative ways of staying ahead of the competition. It involves learning, innovating and adopting behavior designed to improve quality and performance. In the twenty first centuries and the knowledge society, the business landscape is changing rapidly. Survival and success depends entirely on the Organisation's ability to adjust to the dynamics of the business environment. Changes in Information technology have generated gaps in access and control of information and knowledge. How to apply knowledge for growth and sustainability to get competitive edge and to sustainability to get competitive edge and to convert challenges into opportunity?

Knowledge management is the solution for relying the firm's technical capabilities to create the knowledge that drives the organisation forward.

2. What is Knowledge Management?

Knowledge management is newly emerging, interdisciplinary business model that focuses on knowledge within the frame work of an organisation. There are several definitions of knowledge management. It has been described as a "*systematic process for capturing and communicating knowledge people can use.*" Knowledge management acts something *like a library* in that it provides a repository for written information on a given subject but it also tries to make available to the organisation as a whole the knowledge that is in peoples head.

Dr. Yogesh Malhotra, a knowledge management pioneer, explains "Knowledge Management refers to the critical issues of organizational adaptation, survival and competence against discontinuous environmental change. Essentially it embodies organisational process that seeks synergistic combination of data and information processing capacity of information technologies and the creative and innovative capacity of human beings."

In broader context, "Knowledge Management is the process through which organizations *generate value from their intellectual and knowledge based assets which is facilitated by information technology*".

Thus, knowledge management means thinking outside the boundaries of current practices, products, services and organisations. The new and unpredictable business environment puts a premium on innovation and creativity much more then it has in the past.

"Working Smarter, Not Harder"

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"Obsolete what you know before others obsolete it and profit by creating challenges and opportunities other's haven't even thought about".

Several definitions and concepts of knowledge management explain that knowledge management is a combination of people, technology and process (figure 1). The overlapping part in the figure contains several integral parts using accessible knowledge of out side source embedding and storing it in business process, products and services, documenting and storing knowledge, promoting its growth through organizational culture, transferring and sharing knowledge and assessing its value.

2.1 Knowledge viz-a-viz Information

Knowledge gathering is an ongoing and continual process. It cannot be acquired in a single day or night. It is the most crucial aspect which leads to the Organisation's sustenance. The adaptation of an organisation to changing trends of the market is always based on the information.

There is always a misconception that knowledge and information are synonyms but these two are different aspects. Today, managers are suffering from data redundancy i.e. collection of information, so it is not knowledge. There is a thin line of difference between information and knowledge. Information relates to description, definition or perspective (what, who, when, where) while knowledge comprises strategy practice, method or approach (How). A step ahead is wisdom i.e why (principles morale, insight etc). The following diagram gives the clear picture of this relationship (figure 2).

A good knowledge manager will unleash the creative potential in people, embrace new ideas and apply technical know how to develop new work processes that keep the organisation competitive and future focused.

Knowledge management is the process of capturing and making use of firm's explicit and tacit knowledge. Explicit knowledge is a knowledge codified and digitized in books documents, reports, papers, spreadsheets, memos. The internal knowledge can be in the form of case studies, success stories, things that went wrong, war stories, testimonials, deliverables, reports, presentations, templates, training documents, best practices, procedures, instructions, checklists, six sigma projects, etc. It can be retrieved and transmitted more easily than tacit knowledge (figure 2). Tacit knowledge is knowledge embedded in the human mind through experience and jobs. It includes intuition values and beliefs that stem from years of experience. It is the knowledge used to create explicit knowledge and best communicated personally through dialogues and scenarios, with use of metaphors (figure 3).

2.2 Objectives of Knowledge Management

- The foremost aim of KNOWLEDGE MANAGEMENT is empowering employees who are the internal customers of an organization. The employees are empowered by sharing knowledge, replicating knowledge, getting recognized and getting rewarded.
- Standardized process with minimal variation.
- Improving cost efficiency through storage of required knowledge.
- Innovative services using the past experience and the content. Replication allows people to spend time on 'real innovations'.

2.3 Challenges Faced by Today's Organisation

Today business environment is characterized by continuous often radical change such as a volatile climate demands new

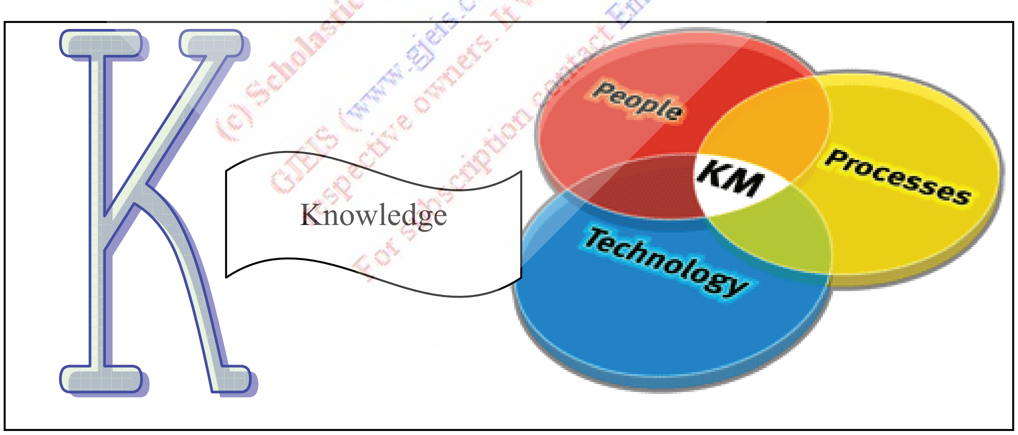

Figure 1. Knowledge Management Factors

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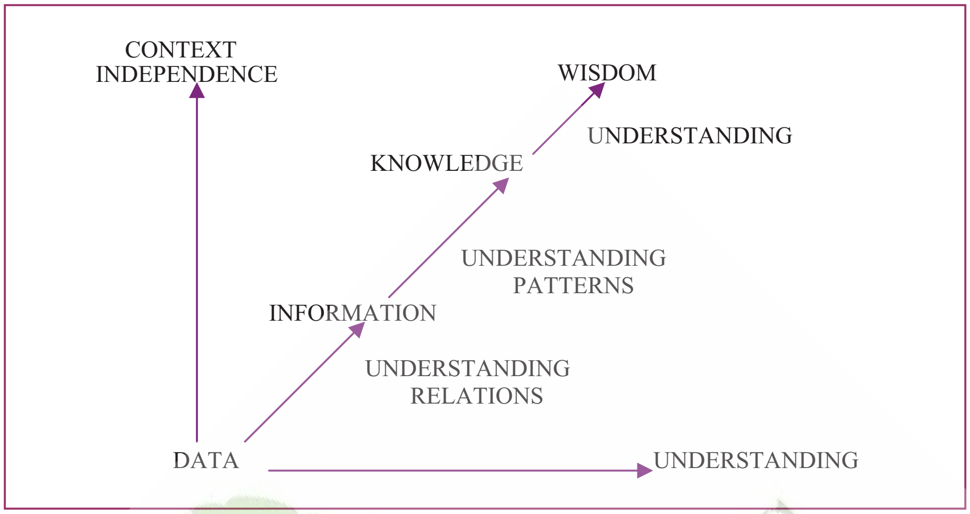

Figure 2. Linkage between Knowledge and Information

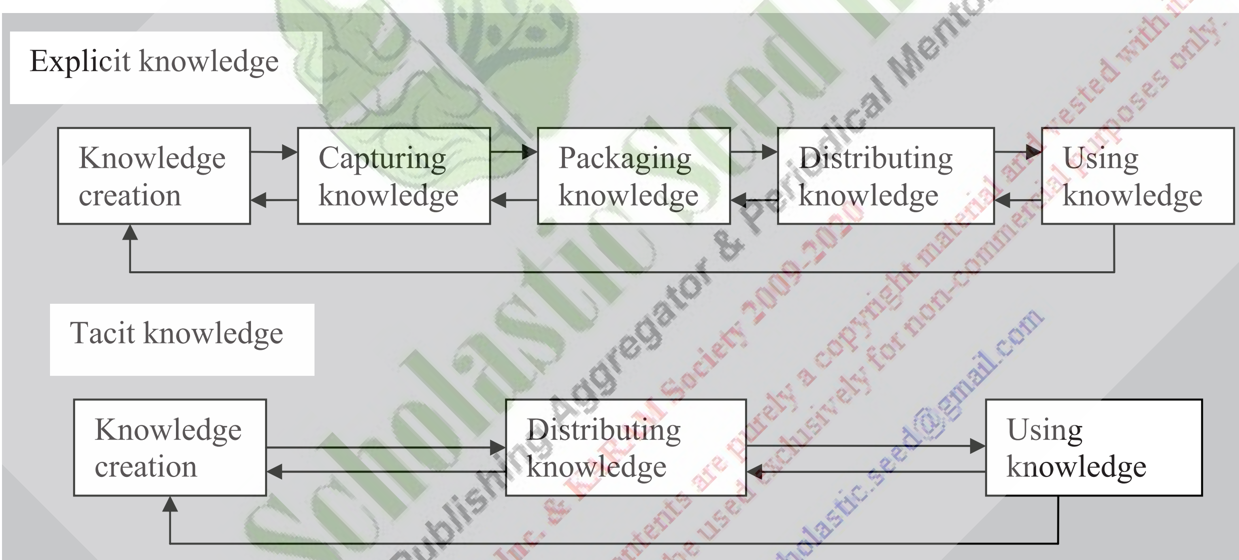

Figure 3. Steps in Knowledge Management

attitude and approach within organizations—actions must be anticipatory, adaptive, and based on a faster cycle of knowledge creation.

Some of the current challenges business face includes:

- An increasing emphasis on creating and improving customer value and service.
- Globalize competitive market with a rising rate of innovations.
- Reduction in cycle time and product development time.
- Changing business rules and assumptions.
- Shrinking resources like people, material, facilities.
- Less time for acquiring new concepts and knowledge.
- Changes in strategic direction and workforce mobility that lead to knowledge loss.

As organisations have become more complex and information more readily available, a concern, to allow knowledge to flow directly within organisation, should have grown in the minds of the manager.

2.4 Knowledge Management as a Growth Driver in an Organisation

Knowledge management provides the process and structure to create, capture analyze and act on information. It highlights the conducts to knowledge, as well as the bottlenecks. Now the knowledge is taking the place of capital (intellectual capital) as the driving force in organisation world wide.

Knowledge management not only answers the critical question of survival of organisations but also induces growth by providing a cutting edge overt others.

Whether to minimize loss and risk improve organisational efficiency or embrace innovation, knowledge management efforts and initiatives add great value to an organisation.

1. Foster innovation

Knowledge management induces innovation by encouraging free flow of ideas. Microsoft hot-mail service advanced the wide use of e-mail that allowed users to exchange information through any web browser. This makes business processes faster and more effective and empowers employees in a unique way. By sharing knowledge an organisation creates exponential benefits from the knowledge as people learn from it. Knowledge management processes induces greater encouragement for learning and sharing of knowledge to build skills sets in the most valuable assets of organisation i.e. employees, which leads to growth of over all organisation.

2. Improved customer service & efficiency

Knowledge management helps in improving customer services by streamlining the response time. Adopting knowledge management leads to improved ways of customer service which enhances the organisations image in the competitive world. Employees are able to access compiled subject customer reference and resource files available either directly through the system or from CD-ROMs available to all offices. Employees are enabled for responding quickly to customer in this manner. Example; There is a knowledge base called CRM that addressed customer relations. The system store customer complaints and weaves their solutions into more intelligent answers for future complaints. Answers are based on refined past knowledge of the same.

3. Boosts revenue

Knowledge management improves the revenue by getting the products and services in the market faster. Today technology has enabled companies to reengineer the ways to do business. Getting partners (vendors, suppliers, customers) up to your speed requires more than fast technology. Knowledge workers and others within the company ensure the co-operation and co-ordination at work for growth of organisation. The diagram in figure 4 shows how knowledge management uses Extranets to link the various business stakeholders for sharing of information.

4. Building sensitivity to brain-drain (retention)

How does the firm replace expertise when it retires, resigns or simply leaves? More and more companies realize the importance of managing and pressuring expertise turnover. Knowledge management tries to enhance employee retention rates by recognizing the value of employee's knowledge and rewarding them for it'. Knowledge management creates the environment that will motivate existing personnel and appeal to potential recruits. It supports higher levels of understanding that tacit knowledge and the implicit skills are key resources.

The human side of knowledge management is very important. The term knowledge capital is sometimes used to describe the intellectual wealth of employees and is a real demonstrable asset of organisation value.

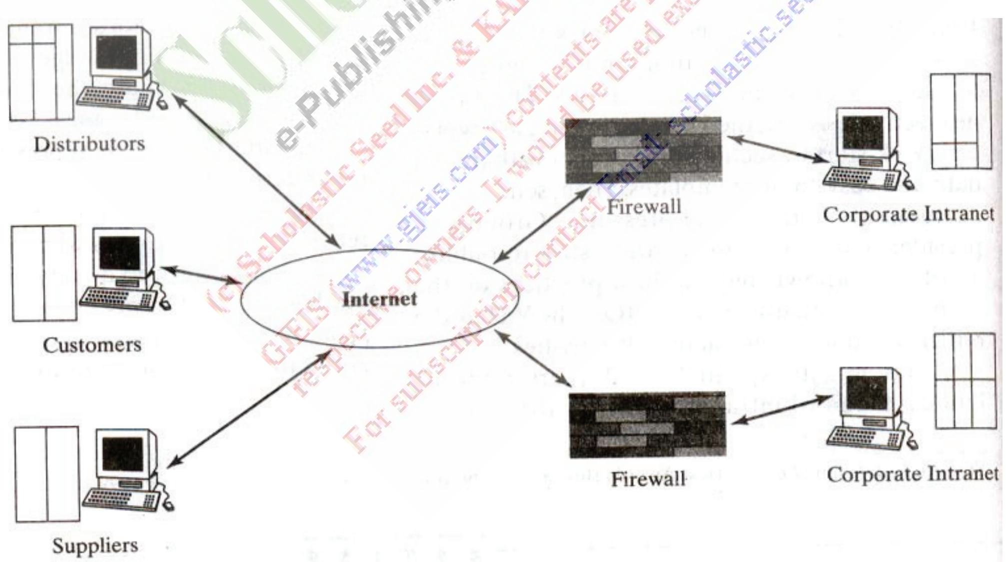

Figure 4. Sharing of Information among business stake holders for Knowledge Management

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A knowledge worker holds unique values, assigns personal and professional growth with corporate vision, adopts an attitude of collaboration and sharing, has innovative capacity and a creative mind, is willing to learn, is in command of self control and is willing to tolerate uncertainties and grow with the company.

Smart managers strive to ensure the right match between various vocational needs (achievement, ability utilization, recognition etc.) of their knowledge workers and the requirements of their jobs for worker satisfaction and retention in the organisation.

5. Reduction of cost

Knowledge management reduces the cost by eliminating redundant and unnecessary processes for higher productivity. Knowledge management adoption leads to improved ways of supporting people through the provision of appropriate processes and information.

2.5 Knowledge Management has a Cost

Knowledge management, like any other initiative, requires significant investment so it must deliver results. The best way to justify investment in knowledge management is to ensure that it is directly tied up with our business objectives. If knowledge management is done well, it will lead to reduced costs, increased revenue and profitability. Beyond technology, knowledge management needs an organization to support it and a culture to facilitate it. Understanding the culture is a key issue for the successful implementation of knowledge management.

2.6 Knowledge Management used as Key Driver for Success: Some Examples

Most of the giant players like Infosys, HCL, Wipro, Philips used to give a lot of value their intellectual asset or knowledge workers. There are some examples as follows:

Hewlett-Packard – by sharing expertise already in the company, but not known to their development teams, now bring new products to market much faster than before.

Texas Instruments – by sharing best practice between its semiconductor fabrication plants saved the equivalent of investing in a new plant.

Dow Chemical – by focusing on the active management of its patent portfolio have generated over $125 million in revenues from licensing and other ways of exploiting their intangible assets.

Skandia Assurance – by developing new measures of intellectual capital and aiming their managers on increasing its value have grown revenues much faster than their industry average.

BP – by introducing virtual teamwork using videoconferencing have speeded up the solution of critical operation problems.

Hoffman La Roche – through its right first time programme has reduced the cost and time to achieve regulatory approvals for new drugs.

2.7 Tools to use Knowledge Management as a Key Driver

A detailed description of the tools used in knowledge management process to use it as a key driver for an organization is discussed below:

1. After action reviews

A tool pioneered by the US army and now widely used in a range of organizations to capture lessons learned both during and after an activity or project.

2. Communities of practice

Widely regarded as 'the killer knowledge management application', communities of practice link people together to develop and share knowledge around specific themes, and are already being established in the NHS.

3. Conducting a knowledge audit

A systematic process to identify an organisation's knowledge needs resources and flows, as a basis for understanding where and how better knowledge management can add value.

4. Connections

A central information resource designed to share knowledge about all programmes and projects underway within the NHS modernization Agency.

5. Developing a knowledge management strategy

Approaches to develop a formal knowledge management plan which is closely aligned with an organistaion's overall strategy and goals.

6. Exit interviews

A tool used to capture the knowledge of departing employees.

7. Identifying and sharing best practices

Approaches to capturing best practices discovered in one part of the organisation and sharing them for the benefit of all.

8. Knowledge centers

Similar to libraries but with a broader remit to include connecting people with each other as well as with information in documents and databases.

9. Knowledge harvesting

A tool used to capture the knowledge of 'experts' and make it available to others.

10. Peer assists

A tool developed at BP-Amoco used to learn from the experience of others before embarking on an activity or project.

11. Social network analysis

Mapping relationship between people, groups and organizations to understand how these relationships either facilitate or impede knowledge flows.

12. Storytelling

Using the ancient art of story telling to share knowledge in a more meaningful and interesting way.

13. White pages

A set from the usual staff directory, an online resource that allows people to find colleagues with specific knowledge and expertise.

3. Conclusion

"Knowledge is power"

"But mere knowledge is not power; it is only possibility. Action is power; and its highest manifestation is when it is directed by knowledge."

– Francis Bacon

The value of knowledge is derived from the value of the decisions with which it is associated. The measurement of knowledge management success is therefore related to improved decision making and the achievement of objectives. Some measures may be objective; others may be more subjective such as attitude surveys among stakeholders. Knowledge Management is helping all managers to establish knowledge resource management as part of their toolkit. Knowledge Management is creating a culture of learning, innovating, sharing and achieving - and most effectively implemented as part of Change Management. So implementation of knowledge management in the organisation will lead to better appreciation and expression of the skills required and available, improved ways of supporting people through the provision of appropriate processes and information, greater encouragement for learning and sharing of knowledge to build skill sets, higher levels of understanding that tacit knowledge and the implicit skills are key management resources, creating the environment that will motivate existing personnel and appeal to potential recruits.

The future knowledge management trends include greater integration and detail. It requires for responding firms to include management of firm documentation, expertise tracking, greater integration of client-relationship knowledge, integration among intranet, extranet and internet sites, automatic categorisation of documents, associate training, personalisation, etc.

Knowledge Management at Bharti: A Success Story

Bharti Tele-Ventures Ltd. is India's first and largest telecommunications company in the private sector. Knowledge management is one of Bharti's key strategic initiatives. Knowledge Management at Bharti is a tool to achieve business objectives faster and better through an integrated set of initiatives, systems and behavioral interventions- to promote smooth flow and sharing of knowledge relevant to the business and to eliminate re-invention.

Key Enablers of Knowledge Management at Bharti

Bharti has seven categories of enablers for KM - strategic focus, alignment with business, KM organization, KM processes, culture, content-quality and technology. Our initiatives under each of these categories are described below:

1. Strategic focus

The biggest enabler is the focus and seriousness of top management and high expectations from KM. KM ranks number five out of the company's top ten strategies identified to achieve the company's business objectives over the next three to five year time horizon. KM and its results form part of monthly business reviews, and of all important management communications. Performance appraisals at all levels include KM-specific measures. The company has institutionalized President's and CEO's Awards for KM.

2. Alignment with business objectives

According to Mr. Badri Agarwal, President, Bharti Infotel, "KM for us is not fashion, but a serious tool to achieve our business objectives with maximum speed and zero re-invention". KM and its results form a permanent agenda item on the President's business reviews with CEOs of each business unit and CEOs' reviews within their units. Mr. Manoj Kohli, President, Bharti Cellular, identified three strategic business imperatives - Customer Delight, Revenue Enhancement and Productivity / Value Maximization. It was ensured that each top priority measure maps with at least one of the President's three strategic imperatives - otherwise, it wouldn't be on the top priority list. All KM initiatives including knowledge repositories, sharing, replication and communities of experts, are structured around each of these top priority business measures.

3. KM organization and roles

Bharti has dedicated KM coordinators centrally and at each business unit. These people act as catalysts in the KM process. They are change agents who bring in and spread the culture of knowledge sharing across the organization. They influence other employees and facilitate the process of sharing and replicating knowledge and measuring the results. They have communities of experts led by knowledge champions. These are functional experts in each of our critical business processes. They collaborate and promote knowledge sharing, replication and performance improvement in their own area of specialization, with necessary support and facilitation from the KM coordinators.

4. Standard KM processes

Bharti is institutionalizing standardized, close-looped processes for knowledge-sharing, replication and measurement of results. Knowledge-sharing and replication that could help improve performance on critical business measures will no longer be a matter of chance or choice, but a mandatory activity like any other business process. Their business leaders are extremely supportive of institutionalizing these KM processes. In fact the demand for such processes came from some of their business leaders.

5. Culture and people engagement

For creating an organization-wide culture of knowledge-sharing and replication, and to institutionalize KM, it is critical for *all* employees to engage in KM activities, and not just a fraction of employee base. To keep track of this, they are putting in place a measurement of "employee engagement in KM". Each month, the percentage of employees in every business unit and in every critical business process who have been part of at least one knowledge submission to the company knowledge base, or a knowledge replication initiative or a knowledge sharing session, will be measured and reported. This will be included in regular business reviews. Their target is to have 40% employee engagement in all directly customer-impacting processes within a year and 80% within two years. They use employee communications, posters, weekly "did you know...?" emails and other media to create curiosity, excitement and awareness about KM among all employees.

A knowledge-dollar (K$) scheme under which employees earn points or K$s every time they share new knowledge in the company knowledge base or every time they replicate or apply knowledge shared by others. This and similar reward and recognition schemes have been institutionalized at the level of individual employees, functional heads and business units. The objective of these schemes is to create interest, excitement and motivation among people, and ensure that early adaptors get high visibility so that they serve as role models for others. They have a KM orientation-training module to which existing and new employees are exposed.

6. Quality of content in knowledge repositories

Quality of content is ensured in two steps. First, all content submitted is scanned by a member of the KM team to ensure relevance to the business, quality of documentation and adherence to standard KM formats. The content then goes to the knowledge champion and community of experts who "own" the concerned knowledge repository. They finally review and approve content for publishing, or edit or reject it if required. Having standard documentation formats for knowledge sharing, replication and knowledge-sharing sessions helps us maintain quality and objectivity of content.

7. Technology enablement

At Bharti, KM is not about technology or IT. However, it has deployed technology as a powerful enabler for KM. Their Knowledge Portal '*Gyan Bharti*' on the corporate Intranet is a common virtual platform for all employees to share knowledge and replication. It contains repositories of re-usable organizational knowledge structured around critical business processes. It helps us to knit experts in each of these processes into *communities*, and facilitates collaboration among members of these communities. The KM portal has automated workflows for knowledge submission, approval and publishing. It also automatically allots K$ to employees, and lets them check their K$ balance and transactions.

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Global Journal of Enterprise Information System

Introduction to Innovative Packaging in India

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Objectives of the Study

1. To study the latest trends in Innovation packaging in India.
2. To understand Company's strategy while going for an innovative concept in packaging.
3. To learn the growing need and scope of innovation with respect to packaging.

Abstract

This contextual paper explains the Indian scenario with respect to innovation in packaging. Packaging is a trump card of the marketer which can either make his product a best seller or ruin the image of the product. Hence Packaging has been added to the 7P's of marketing. Packaging is ultimately a marketing function, it is the final marketing message your customers will see before purchasing the product. It was Peter Drucker, the famous Author of the business corporations of the 20th century, who said that Business has two functions–marketing and innovation. When I have thousands of products in the market shelf I need a differentiation on the window of opportunity. Here packaging plays a crucial role by creating identification for the product and a differentiated brand. 'Jo Dikhta Hai Vo Bikta hai' (What is Visible, Sells) as per the Brand Mantra 7 in Twenty Four Brand Mantras: Finding a Place in the Minds and Hearts of Consumers (Kapoor, 2009). The visibility or the nutshell of the product creates uniqueness of the product. Moreover when we add a pinch of Innovation to Packaging, it transforms the product from, just a product to, *"this" is the product*. Innovation involves deliberate application of information, imagination and initiative in deriving greater or different values from resources, and includes all processes by which new ideas are generated and converted into useful products.

Innovative packaging may actually add value to the product by

- Easy to store
- Good to look
- Recyclability
- Non Breakability
- Tamper-proofing
- Convenience handling

Indian Packaging Industry is likely to touch $44 bn by 2016 (Source Press Trust of India, Jan 22, 2013). India, with immense market opportunity, needs to utilize the packaging concept with innovation. In retailing, packaging has an extreme importance with respect to the storage, handling, protecting and information about the product.

Keywords: packaging, innovation, innovative packaging, product, product range

1. Introduction

Consumerism has enhanced the scope of marketing for seller and buyers both. High demand of sustainability, social responsibility, and ethics practices transformed the area of packaging with respect to the concept of 3R's i.e., Recycle, Reuse and Regenerate. We are living in an Era of Beauty with Brains which goes for products packaging as well. Size, shape, design and colors signify a product's beauty. Whereas convenience, storage and ready to use concepts add a brain to packaging. Right-sizing packaging in terms of efficient package shape/size, down gauging of package material and minimizing package failures dominate. Companies like Nestle Ltd, PepsiCo Ltd, Haldirams Co. Pvt Ltd. and tuborg ltd etc with Indian and foreign based

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are recuperating their packaging to explore the Indian Market. Consumers are concerned about their ease, cargo space, affordability and safety of the material. Here the role of innovation is very curial with respect to the economical cost, intend and convenience. The following should be the advantage of Innovating Packaging.

- Flexibility & light weight.
- Cost effective & hygienic.
- Transparent & easy printing.
- Increases shelf-life of the produce.
- Used for cultivation during winter.
- Provides invaluable support during processing, storing, preserving and transporting.

Indian's Packaging has been segmented with respect to two major demographic segmentation i.e. with Rural marketing and Urban marketing. The following are the illustrations

- HUL came up small sachets for rural marketing.
- PepsiCo and Coca Cola Ltd came up 100 ml cold drinks packages for rural market.
- Maggi pichkoo for urban market.

Rural residents found that packaging is more helpful in buying, that better packaging contains a better product and that they are more influenced by the ease of storing a package than their urban counterparts. Ease of carriage, package weight, simplicity, transparency and similarity of packaging have comparatively less impact on purchase decisions of rural consumers than urban ones. However, rural consumers are more critical about packaging as they strongly consider that it contributes to misleading buyers and is also an environmental hazard. (Sehrawet, & Kundu, 2007)

In the study of Ms. Malik Garima (2012) in the paper "The Impact of packaging on buying behavior: A Comparative Study of Rural and Urban Consumers" revealed that rural residents found that packaging is more helpful in buying, and better packaging contains a better product. They are more influenced by the ease of storage of a packaged product than their urban counterparts. Ease of carriage, package weight, simplicity, transparency and similarity of packaging have comparatively less impact on purchase decisions of rural consumers than urban ones (Malik, 2012). In few other research it has been found that the key trends fostering growth in developed packaged food markets are convenience, functionality and indulgence (Ahmed, Ahmed, & Salman, (2005)). Moreover, commercially successful product development projects involved a multidimensional approach to design with a focus on product performance, features and build quality and, where relevant, technical or design innovation. (Roy & Riedel, 1997)

2. Companies and their Competencies

2.1 HUL- Kissan

Today, Kissan is more than just jams, ketchups and squashes. It's all about kids eating happily & growing up happily. Filled with nothing but natural goodness, Kissan has found a way to keep both, mothers & kids happy.

Being pioneers in food processing, Unilever launched the category of ketchups and jams under the brand name Kissan. With the current launch of the Kissan 100% Real Campaign, kids can now enjoy the real taste of jams and ketchups. Made from 100% real fruits and tomatoes, Kissan jams and ketchups are now even softer, richer and yummier for kids to eat, without mothers constantly having to worry about what they are consuming. Because with Kissan everything is 100% real.

Over the years, the Kissan portfolio has expanded with yet another launch; the launch of Kissan Creamy Spread. A unique product with a mayonnaise base blended beautifully with local Indian flavours. With superior taste and three times more nutrition than butter.

Product range

After decades of research, Kissan Jam (a market leader in the "Jam" category in India), another radiant brand in the HUL portfolio, has realized that children, the main target segment for jams, are finding it difficult to take the jam out of the wide yet narrow necked bottle. Most of the spoons in the household do not go into the bottle and knives have to be used to take a scoop of jam. Obviously knives are a dangerous product to be used by small kids. Added to that, the bottles are expensive, and is of no use to the customer after its finished.

Kissan Jams has now introduced the latest "Jam Squeeze", where the product is packaged in the form of a tube, where all one needs to do is to squeeze the jam onto the plate or directly in the bread. (They also have tied up with Disney to print several cartoon characters in the tubes to target young kids) Simple, yet brilliant isn't it?

Kissansqeezee jam

Competencies

1. Convenience in terms of usage (easy squeezee pack).
2. New plastic squeezy pack rather than glass bottle for better handling and storage.
3. Children friendly and no tension of breakage.
4. Using famous cartoon pictures on pack cover to attract major market segment of their prime consumers i.e. children.
5. Using fluorescent and vibrant colors to gain consumer's attraction.

2.2 Carlsberg Group

Carlsberg entered India in May 2006 by incorporating a company named South Asia Breweries Pvt. Ltd. The name changed to Carlsberg India Private Limited on 23rd February 2009 to reflect the company as a part of the Carlsberg Group.

India is one of the fastest growing markets for the alcohol industry. As for the beer market, it has grown at 17% in the year 2010 and is forecasted to grow at 12% CAGR going forward.

The ambition of the company in India is to be the fastest growing beer company in India. Carlsberg India is the number 3 player in the market within 5 years of operation.

Product range

Competencies

1. New easy to hold grip design for the Indian consumers.
2. Unique pull off cap for easy opening without a bottle opener.
3. Convenience with respect to ready to use.

2.3 Nestle India-Maggi

MAGGI Cuppa Mania

Rushing to work or hungry after a class? Working on assignments while texting your girlfriend? Trying to grab a quick bite while rushing between meetings? With multi-tasking becoming a necessity, it is essential that you have a quick meal that is healthy as well.

Maggi Cuppa Mania Noodles fits perfectly into your lifestyle while satisfying that hungry belly with instant taste, anytime. Take the Cuppa Mania wherever you go and enjoy convenience by just adding boiling water for a quick and healthy meal. With 2 mouth watering variants Masala Yo! and Chilly Chow Yo!; a fork inside for on-the-go consumption, attractive cup sleeves, real vegetables and calcium.

Competencies

1. Famous maggi noodle now available in a ready to go cup pack.
2. Easy peel-off cup sleeves.
3. Enclosed fork.
4. Available in two variants.

2.4 Nestle-Maggi Pichkoo

MAGGI Pichkoo

Pichkoo is a small doy pack which makes MAGGI Tomato ketchup affordable to a host of new consumers. And now, MAGGI makes the delight "Bigger' by introducing a BadaPichkoo. A large Tomato Ketchup doy pack which ensures that the fun goes on and on.

It's endearing name, packaging and great taste evoke a resounding reaction.

"New MAGGI Pichkoo - It's different!"

Competencies

1. Low cost plastic pack.
2. Pichkoo pack with a nozzle providing travelling solutions, different from traditional ketchup sachet.
3. Being the first in the market to launch ketchup in a Pichkoo pack.
4. Break free and children friendly.

2.5 ConAgra Foods Inc. - Act-II

ConAgra Foods Inc. (NYSE:CAG) is one of North America's largest packaged food companies, serving consumer grocery retailers, as well as restaurants and other foodservice establishments. Popular ConAgra Foods consumer brands include: Banquet, Chef Boyardee, Egg Beaters, Healthy Choice, Hebrew National, Hunt's, Marie Callender's, Orville Redenbacher's, PAM and many others.

ACT II is known for offering consistent quality at a great family value. We're proud to present some of the most enticing popcorn products and flavors available, from our classics like Light Butter and Movie Theatre Butter to our special features like Kettle Corn, now with 0 grams trans fat.* Our other great products range from Pop 'N Serve Tubs to individual popcorn balls. Be sure to check back here frequently for the latest on all of ACT II's great products, and remember ACT II for light, fluffy, great tasting popcorn every time.

ACT II's Mini Bags are personal bags of microwave popcorn that are ready in a snap and perfect for school, the office, the car, anywhere. They're a great snack solution for people on the go. Mini Bags are available in Movie Theatre Butter, Butter Lover's, Butter and 94% Fat Free flavors.

Product Range (Microwavable)

Competencies

1. Easy to cook popcorn.
2. No need of separate cooking utilities. Cook and serve packs.
3. Faster microwavable cooking.
4. Available in different sizes according to the requirement.

2.6 Haldiram & Sons Bhujiawala

It was founded in 1937 by Gangabisenji Agrawal, as retail sweets and namkeens shop in Bikaner, Rajasthan, India. Haldiram was based in India and has been favorite for all the religious people. Many families have enjoyed the tastes of the delicious cuisines provided by Haldiram's.

Product Range

Competencies

1. Added convenience with the launch of new zipper packs.
2. Easy to store.
3. Keeps namkeen crispy, i.e., extra freshness.

3. Conclusion

In this paper we can identify the aspects as well as the competencies the companies are looking and going for innovating packaging:-

Diagram as per our study

3.1 The Convenience Concept

Companies discussed are majorly looking for convenience factors for their customer. With busy schedules of corporate world, professionals want everything right now with all ease. Hence, we identified products like Cuppamania, Carlsberg beverages or Halidram's zipper packs, are inclined towards the convenience factor. For innovation they added ease factor in their packaging. Ready to use product concept is adopted by companies in innovation packaging.

Cup noodles are not new to the Indian market, but what's new is an added pinch of convenience that Maggi has added to its product-"Maggi Cuppamania". Cup noodles serve as a ready to eat meal for a starving stomach when your alone, or travelling or out of cooking utilities. All you need to make a cup of ready to eat noodles is a cup of boiling water. Noodles will be ready in minutes, but you keep looking for a fork or a pair of chopsticks to gulp it down your throat. Yes, you will still need a fork to eat those noodles through those old traditional Cup noodles. Maggi launched its Maggi Cuppamania to serve all the above mentioned requirements met by the other cup noodles and also to serve that one thing which others failed to do. Maggi added a fork inside its Cuppamania pack for its consumers. And that is where it gained an edge over others. Maggi noodles have been the favorite Instant noodles of millions of children and adult over the Globe. Added convenience with the blend of the same old taste of Maggi noodles has taken Maggi to a whole new dimension.

3.2 Tension Free Time

Furthermore, Pichkoo and Squeezee packs of ketchup have made the product handling easier. We can carry, store or keep the product any where we want. Customer will remain tension free for its breakage problem. The Glass container packs of Ketchup and Jam sold earlier had the following flaws:-

- handling problem
- heavy to carry
- couldn't be handled by children
- splintering fear

While looking for a jam bread solution for a hungry stomach, the first thing that comes to mind is to look for a perfect spoon or knife which could easily fit into that narrow head of jam bottle and is easy to apply on bread. But yes now with the launch of the new jam squeeze and jam tub pack that is no more a concern. Squeeze pack allows putting jam on bread directly, no more looking for a perfect spoon. While a tub pack, totally eliminates the concern of looking for spoon which would fit in the narrow head of the jam bottle. With Kissan coming up with such innovative packaging ideas in India, it has made the lives of the Indian households better.

Hence with the introduction of this innovative packaging by Kissan, customers can easily enjoy the taste without the fear of break or storage.

3.3 Ready to use Era

Ready to use concept in Maggi Cuppamania and opening the drink breakages without opener completed the customer wish to live life easy. If a customer is hungry they need to add hot water in Maggi Cuppamania and it becomes ready to eat and when they feel thirsty they have the Carlsberg non alcoholic beverages opened with the help of an opener.

Butter popcorn is loved by many people. But making them at home is quite a task. This is where Act-II Ready to cook butter popcorn pops in, which is now available in microwavable packs. All you need is to open the outer covering, put it in a microwave and its ready in minutes. One more thing which Act-II has provided is the use of "*cook and serve*" packaging material. No need of looking for a microwave safe bowl to enjoy these delicious popcorns which are available in various flavors, just cook it in a mini bag or a tub, and eat right through it.

3.4 Carry me Anywhere Notion

With Kissan jam sachet or Maggisauce Pichkoo pack, consumers can easily carry the product while travelling anywhere. Innovation is adding ease to all Indian consumers with respect to the travelling time, office time and family time.

Haldiram's Zipper bags are often observed to be used even after its content has been consumed. Its packet is used as a substitute for foil paper while travelling. The food remains packed nicely and stays hygienic.

4. Limitation and Scope of the Study

This conceptual study is based on the data presented on the website of the company. This study was attempted to identify existence of a phenomena, which though theoretically anticipated, has not been tested practically in the Indian market. The study is but a small attempt to identify self acknowledged awareness of the phenomena towards the innovating packaging. Scope of Innovation packaging is enormous. This is just a discussion of topic.

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BOOK REVIEW

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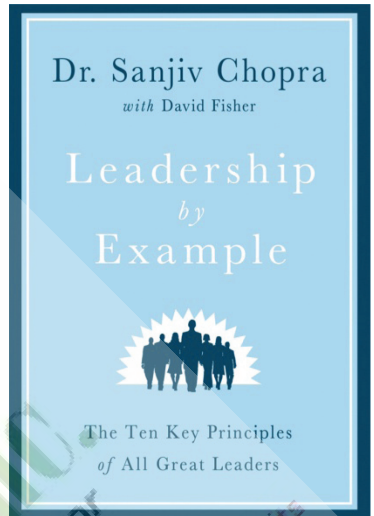

Leadership by Example

Sanjiv Chopra and David Fisher

Citation

Chopra, S., & Fisher, D. (2012). *Leadership by Example*. Thomas Dunne Books.

Abstract

Leadership by Example is an incredibly engaging and inspiring book with an elementary writing style that beautifully uses real-life stories of leadership to convey that everyone can be an effective leader. The author displays a perspective on leadership across cultures and through time. Attributes such as Empathy, Integrity, Honesty and humility have been highlighted to drive home the point that they all are quintessential elements to achieve an accomplished goal. The book is an excellent guide for future leaders.

Keywords

Principles, Humility, Dream, Attitude, Listener, Empathy, Resilient, Sense of Purpose

Review

The book is an interesting narrative loaded with excellent quotes. The author has aptly laid out the underlying principles that define "leaders". The Author spells out 10 easy and time-tested leadership tests for anyone aspiring to be a great leader. The author challenges the convention that to be a leader you need to have followers. Dr. Chopra says that leaders take charge by virtue of their actions and decisions and others choose to follow. The book begins with the introduction highlighting the word "Leadership" and within that the 10 letters that spell out the unique attributes exhibited by leaders.

'L' stands for Listen, 'E' for Empathy, 'A' for Attitude, 'D' for dreams and decisiveness, 'E' again for Effective, 'R' for resilient, 'S' for sense of purpose, 'H' for humility and humor, 'I' for Integrity and finally 'P' for possessing people skills.

These 10 tenets of leadership form the 10 chapters of the book and indeed spell leadership. The author has given countless examples of many leaders whom we revere. They were ordinary individuals who went on to achieve extraordinary feats.

In spite of sharing various inspirational stories, Chopra goes on to reiterate that none of us should ever forget that leadership is a marathon journey and not a sprint. It's a journey, not a destination, but possibilities are endless.

An endlessly absorbing book, captivating the readers' interest from start to finish.

The book is an excellent guide for future leaders with an elementary writing style. Being adaptive and flexible in your verbal and non-verbal responses gives an extra special edge not just in selling but in interacting with others. The author displays a perspective on leadership across cultures and through time.

The author reiterates that charismatic leaders are truly inspirational and their courageous accomplishments can be applied by people to further improve their lives and consequently whom we care for thereby making a significant and positive contribution to the world.

Finally the Epilogue mentions how some leaders become by chance rather than choice and Truman was one of them.

The author has used several anecdotes and has narrated the 10 commandments such lucidly and effectively that can surely aspire anyone to be a great leader.

Overall an informative and worthy read.

BOOK REVIEW

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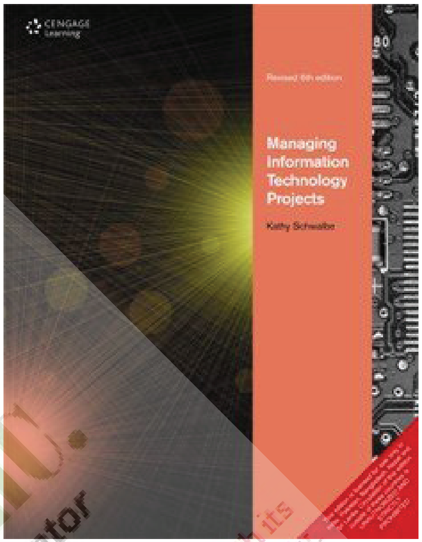

Managing Information Technology Projects (Revised 6th Edition)

Kathy Schwalbe

Citation

Schwalbe, K. (2010). *Managing Information Technology Projects* (Revised 6th Ed.). CENGAGE Learning.

Review

The author, Dr. Kathy Schwalbe, is back with a new and wonderful 6th edition of the book titled "Managing Information Technology Projects". This is a very comprehensive coverage of the subject with particular emphasis on the solution of problems arising during software project management.

The author has given a depth and breadth to the coverage that is not easy to find in other texts. Concepts are written in such a manner which can be easily grasped by the beginners. Project management is supposed to be a critical factor for the success of any kind of business. The book emphasizes how software projects can be managed easily by implying the basic processes.

To begin with, the author explained the importance of management of Information Technology projects with the help of good examples and cases. She also provided a brief introduction of nine knowledge areas of project management i.e. scope management, time management, cost management, quality management, human resource management, risk management, procurement management, integration management, and their tools and techniques used for projects' success and to develop the understanding of the readers for the topics presented later.

Along with the theoretical concepts, the author has also tried to make the reader inclined towards managing the project practically, by giving good practical examples of MS-Project. The readers are also introduced with the Project Management Institute (PMI) in the first chapter itself to achieve its benefits, if interested.

Various important concepts of Project Management like WBS, Gantt chart, network diagram, PERT & CPM charts have been discussed in a very user friendly manner with the help of pictorial examples. Other than that, financial & accounts concepts, HR theories, project communications and quality related concepts have been brushed up, to enhance the overall importance of the book from the project management's perspective.

The discussion questions and other exercises given at the end of each chapter can be used by the instructors to provide an application oriented subject knowledge to the students. Not only for IT specialization students, but this book will also be useful for each and every management student.

In conclusion, this book, along with lots of cases and exercises, will be able to cater to the needs of students from variety of disciplines of management.

Biographical Note of the Luminary in an Area of IS

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Gerhard Chroust (born April 23, 1941 in Vienna) is an Austrian systems scientist and Professor Emeritus for Systems Engineering and Automation at the Johannes Kepler University of Linz, Austria. Chroust is an authority on formal definition of programming languages, system development processes, software qualitystandards and process assessment, and impacts of cultural differences on system development.

Current key research areas are: Human Aspects and Cultural Differences in System Development, Systemic Aspects of System Development and Disaster Management, and Representation and Enactment of Software Process Models.

He started to study Communications-electronics in 1959 and received a Diplomingenieur ('M.Sc.') from the Vienna University of Technology in 1964, a M.Sc. from the University of Pennsylvania in 1965, and a PhD. from the Vienna University of Technology in 1974.

From 1966 to 1991 Chroust worked at the IBM Laboratory Vienna in the fields of Formal Definition of Programming Languages, Compiler Development, Modeling of Software Development Processes and Microprogramming.

During these years he also became Lecturer for Microprogramming at the Johannes Kepler University Linz and the Technical University Vienna in 1975. In 1980 he was awarded the title of Assistant Professor in Computer Science, and lectured "Microprogramming", "Dataflow Mechanisms", and later "Software Development Processes" at the Johannes Kepler University Linz, at the University of Klagenfurt, and at the Technical University of Vienna. From 1992 until 2007 he was tenured Professor for 'Systems Engineering and Automation' at the Johannes Kepler University of Linz and Head of the Department (in 2004 transformed into an Institute) of Systems Engineering and Automation. He has been a Professor Emeritus since 2007 and is primarily engaged in project work related to systemic aspects of disaster management.

He has published 8 authored books, approx. 45 proceedings, 215 scientific publications and approx. 280 other publications.

Chroust is bearer of the Silver Medal of Honor of Upper Austria.

Chroust has been Co-Organizer, Co-Programme Chair, and Co-Editor of IDIMT (the yearly Interdisciplinary Information Management Talks) since 1993 and of the bi-annual IFSR Conversationssince 1996. He is Editor-in-Chief of the Book Series 'Informatik' of Trauner Publisher Linz and of the IFSR Newsletter.

He has been member of the Editorial Board of the Book Series of the Austrian Computer Society (OCG), the Journal of Systems Research and Behavioral Science since 1994, the Journal of Microprocessors and Microsystems from 1976 until 1985, the IBM Programming Series from 1978 until 1990, the Computer Standards and Interfaces from 1992 until 2005. In 1997 he was on the Academic board for the International Encyclopedia of Systems and Cybernetics, edited by Charles François.

He has served as a member of the Programme Committee on numerous international conferences from 1974 until now.

Chroust is organizationally active as Secretary General of the International Federation for Systems Research (IFSR). He is a Member of the International Academy of Cybernetic and Systems Studies (IASCYS), Board Member of the Bertalanffy Center for Study of Systems Sciences (BCSSS), of the Austrian Computer Society (OCG), and of the Austrian Society for the History of Informatics (ÖGIG). He is Honorary Member of the Austrian Society for Informatics (ÖGI) and Advisor to the Austrian Standards Committee. Further memberships include: ACM, IEEE, INCOSE, ADV, and GI.

Biographical Note of the Luminary in an Area of IS

Prof. Mitch Charkiewicz
Professor of Economics,
Central Connecticut State University
mitchchark@cox.net

Prof. Mitch Charkiewicz joined CCSU in 2002 after working in operations at IBM and coming over after responsibility for 24×7 Internet financing for Priceline.com. While in the Economics Department, Mitch has been nominated for the Excellence in Teaching Award for five consecutive years. His current research interest is that of the economic impact of the new lock system project currently underway for the Panama Canal. He has developed experiential course abroad programs for both undergraduates and graduates to Iceland (Global Climate Change), Panama (Impact of the Panama Canal), Monaco (History and Development of the EU) and Scotland (Scottish Enlightenment).

Great Achievements

- Effective and innovative Professor in Economics, Finance and International to both undergraduates and graduates.
- Have taught both traditional class and online courses; plus design and conduct short term field study course abroad programs.
- Have experience in 5 continents and over 50 countries. Knowledge of history, government, business as well as cultural sensitivities.
- Willing and available to continue providing experiential education and training in a corporate or educational setting.
- Liaison to the Smithsonian Tropical Research Institute program with both Economics, Biology and Chemistry components.
- Representative for the AEA (American Economic Association) Summer Scholarship initiative with Duke University.
- Liaison to Queen Margaret University, Edinburgh, Scotland.
- Prepared Finance I and Finance II curriculum for the MBA Siracusa, Italy program.

Developed Programs and Directed Course Abroad Field Studies:

- Monaco, France, Italy: History and Growth of the European Union.
- Iceland: Global Climate Change: Global Warming.
- Panama: Expansion of the Panama Canal.
- Paris-Nice-Monaco: The United State of Europe.
- Scotland: The Scottish Enlightenment with Adam Smith and David Hume.
- Monaco, France, Italy: History and Development of the European Union.
- Panama: Significance and Impact of Panama Canal.
- Monaco, France, Italy: History and Development of the European Union Practicum in Finance: Wall Street Field Study:
- Panama: Financial Capitol of Latin America.
- Monaco, France, Switzerland and Italy: The new Euro, as the EU expands to 25 members.
- Advisor for Finance Association, sponsored programs with:
  - Federal Reserve Bank of Boston.
  - Asian American Bank.
  - Harvard University.
- Institute on Latin America, Yale University.
- Institute on Global Issues, Yale University.
- Institute on Postwar Asia, Smith College.
- Yale International Affairs Faculty Committee.
- Institute on Korea, Yale University.
- Conference on East Asia: Hong Kong, Singapore and Vietnam, Smith College.
- Conference on East Asia: China, Japan and Korea, Smith College.
- Conference on Politics and Performance, Harvard University.
- Conference of Korea, Mt. Holyoke College.
- Director, Omicron Delta Epsilon - Theta Chapter, Economics Honor Society.
- Conference of International Trade and Economics in the Sichuan Province, People's Republic of China.

Recognition

- Award of Appreciation -- University of Kuwait.
- Nominated for Excellence in Teaching Award (6 consecutive years CCSU).

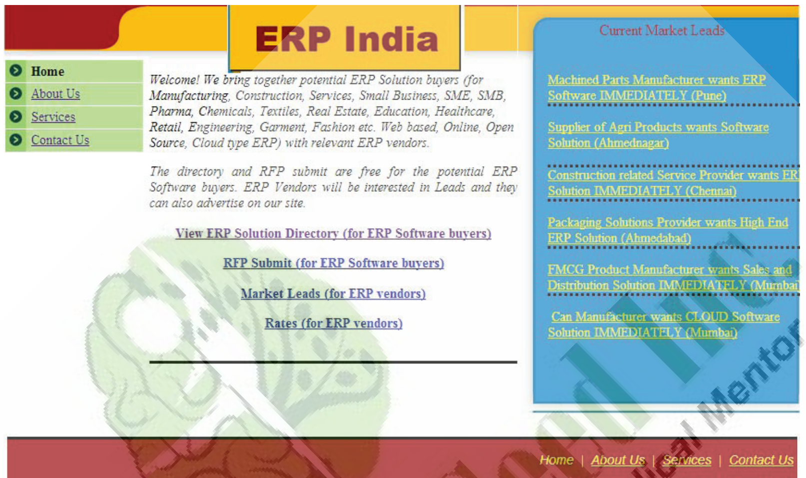
Professional Activities

- Northeast Business and Economics Association NBEA
- President
- Webmaster
- Treasurer
- Board of Directors
- Conference Organizer 2001, 2002, 2007, 2013

Great Enterprise Contribution to Society in Information System Perspectives

ERP India Web Portal (erp-india.org)

Mr. Vispi Munshi, Founder and CEO



ERP India started as an online community (a yahoo discussion group) in 2003. The purpose of the group was to explore the implementation and use issues of ERP systems in India. Members from other groups and forums were invited to join and the group started discussing instantly relevant topics. Membership was free. A minimal registration process was required to become and member and participate in the discussions. The discussions were moderated to remove junk and product promotional messages.

Later a web site was created in to supplement the online group. Initially the site was meant to document and archive the group procedures and topics. Later the site was expanded to provide additional services such as a directory, job board, event notifications etc.

The online group and the web site was owned by a single individual (Mr. Vispi Munshi). He transferred the ownership to a Private Limited Company (a legal business entity in India) in 2004. Mr. Munshi became the CEO of the company.

As the web site was extended to a web portal, the promoter positioned the portal as an intermediate or match maker between ERP buyers and sellers. Services were identified for different interest groups. Some services were kept free, while some were nominally charged and some fully charged. Three revenue generation streams were identified. Namely Directory Services, Advertisements on web site and Sales of Leads generated from web site visitors. Initially the directory service was bundled with Leads, however later they were separated. The ERP vendors showed high interest in the leads service, however the response to other services was lackluster. The entity generated a nominal cash profit for four years in a row.

The leads service was initially sold as a subscription service, with options for regional and duration. After a few years however a saturation point was reached. The entity tried to diversify in to other areas such as CRM, SCM, BI and ISO. However, much more patience and investment were required to make these areas profitable as the ERP portal. Eventually it was decided to stop the additional portals and focus on the profitable ERP portal. Also it was decided to stop selling leads as a subscription and sell them in quantity packs. This restructuring caused the sales to plunge and the entity became non profitable. However the promoter persisted and after a year, sales recovered and better profitability was realized.

At the time of writing of this case study, ERP India stands at crossroads. Since it has a single promoter, there is a crunch on the resources available. Hence even though the entity is cash profitable, it is not able to expand or diversify to new areas. New areas such as additional portals for other enterprise IT areas and International markets have been identified. The promoter has a background of domestic and International experience in enterprise software technologies. Also efficient procedures and processes have been established to run such web portals efficiently. However to scale up, there will be some period of non profitability. Hence the promoter is looking for angel investors.

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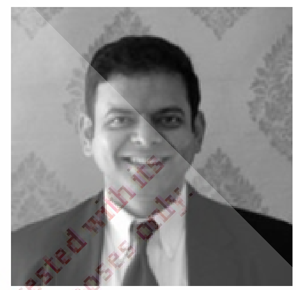
Great Enterprise Contribution to Society in Information System Perspectives

– VMOCK - An online instant resume feedback application



Salil Pande
CEO & Founder, V-Mock
salil.pande@vmock.com
Website: www.vmock.com
http://www.linkedin.com/in/salilpande01

A passionate singer and poet, Salil started VMock with the intent of enabling people to realize their career dreams regardless of the resources at their disposal. Prior to founding VMock, Salil has a strong background in operations and sales from his profound experiences as the head of emerging markets at Siemens Healthcare Diagnostics, Director of sales at the Corporate Executive Board in Washington DC, and working in the Middle East and Europe for Schlumberger. He is a speaker and a thought leader in many conferences and educational institutions globally. He holds an MBA with honors from Chicago Booth and an Undergraduate degree from Indian Institute of Technology, Kanpur.

VMock's mission is to ensure that every professional has the best career journey they possibly can. VMock enables this through a career development platform that leverages a sophisticated analytics engine. Their goal is enable their users to own their careers and chart a path that helps them get to their goals by enabling them to prepare their resumes, practice their pitch, and share and receive feedback from their social network and experts and hence in a position to leverage a strong professional profile. They build innovative products that are cutting edge and deliver unmatchable value.

In a short span, VMock has delved into a variety of realms of business. With their Career Development Platform, they are providing services to some of the premier institutions in the country like the IITs and are also tied to the Ministry of Home Affairs in a special initiative of the Prime Minister and the National Skill Development Corporation called Project Udaan which is aimed at making the youth of Jammu and Kashmir skilled and employable. Students and Job seekers from over 150 colleges and over 20 Industries respectively are all using VMock.

The success of VMock is a function of the efforts of the brilliant team that works to constantly innovate and deliver perfection. Salil has a passion for delivering value and making a difference and clearly, VMock, with over a million professional portfolios analyzed and lives touched has a long way to go.

Great Enterprise Contribution to Society in Information System Perspectives

POLLYANNA POSITIVE PARIVARTAN PVT. LTD
The Success Mantra...

Shalini Verma
Founder - Pollyanna Positive Parivartan Pvt. Ltd
info@shaliniverma.com

"Change is inevitable" ... or so the Greek philosopher, Heraclitus, is often quoted as having said. When we talk about business, the ability to adapt to changing markets is essential. Even more important is our ability to see change coming and react quickly enough to survive in today's fiercely competitive business world. Organisations that survive are those that are adaptable to either minor shifts in trends, or huge changes in the economy. These may not necessarily be changes to our principles or missions, but they may very well be practical changes in the way we function in the Knowledge Economy of the 21st century.

With this firm belief in: **'Change is the Law of Nature and Positive Change is the Mantra of Success',** Dr. Shalini Verma founded **POLLYANNA POSITIVE PARIVARTAN Pvt. Ltd. (P4L)**, a New Delhi based Consultancy firm offering services in the field of Training and Development, in 2006.

Ever since, P4L has taken it as its responsibility to make 'positive change' a way of life by bridging the gap and making connections between people, organizations, and places. And in this regard the company has been consistently connecting students with their dream career, job aspirants with their desired organization, recruiters with their ideal employees, sales professionals with their market, CEOs with their goals and so on and so forth through their Communication, Soft Skills and Behavioural Training programs.

The company has been offering quality services to corporate houses pan India and abroad across sectors – education, hospitality, tourism, BFS (Banking and Financial Services), media, IT& ITeS, manufacturing.

Till date the company has delivered around 5000 hours of training programs to more than 20000 participants from across verticals and sectors.

Dr. Shalini Verma herself is a reputed name in both — the academia as well as the corporate circles for her workshops and training programs on Soft Skills, Communication, especially Body Language, Interviewing Skills & Communication Strategy for Organizations.

She is an academician of high caliber with Master's degree in four varied areas – (i) English Literature; (ii) Human Rights; (iii) Communication & Journalism, and (iv) Business Administration and Ph.D in Humanities.

With 20 years of experience in academia and industry, including Ohio University – US and ISTAO – Italy, Europe, Dr. Verma has also been associated as Visiting/Adjunct Professor – Communication with several reputed B-schools including the IIMs.

Being a prolific writer, Dr. Verma has authored around 50 books on several genres - 16 Management & Self Help; 26 ELT (English Language Training); and 8 Competition books. Some of her bestselling titles include:

- **Body Language: Your Success Mantra**
- **Enhancing Employability @ Soft Skills**
- **Kit for CAT**
- **Word Power Made Handy**
- **Easy English Grammar**

All these books have been received overwhelming response both in the Academia and the Industry.

Besides, having presented number of papers in the national and international conferences, she has contributed more than 300+ articles (both in English and Hindi) in the **Hindustan Times**, **Hindustan** (Hindi) and other national newspapers/academic journals.

She is regarded as the first Indian author to write a book on Body Language from the Indian perspective. Her book **BODY LANGUAGE: YOUR SUCCESS MANTRA** is acclaimed as the bestseller on the subject.

She is a well known Body Language Connoisseur in India today. Her services as Body Language Connoisseur are hired by well known corporate houses, academic institutions and beauty pageant organizers. She is invited as Body Language Expert to interpret the non-verbal cues of candidates during their interview process.

Some of her popular programs are:

- Decoding Body Language: Listening the 'Unspoken'
- Interviewing Skills (For Recruiters)
- Reading Non-verbal Cues (For Interviewers & Managers)
- Body Language from Cross-cultural Perspective
- Success @ Positive Parivartan

She keeps creating awareness on the subject through talk shows on various TV channels, panel discussions, guest lectures, workshops and seminars.

What is Body Language?

Communication connects. Your ability to communicate connects you to the outer world as well as to your inner self. Your ability to communicate, and communicate effectively, is one element that governs almost everything in your life. It decides whether you get recognition or rejection, honour or dishonour, and fortune or failure in your life. In a way, you exist because you communicate and you communicate because you exist.

Edward M. Hallowell says in his book *Connect: 12 Vital Ties That Open Your Heart, Lengthen Your Life, and Deepen Your Soul,* "We know we need food, we know we need vitamins and minerals, we know we need water and air, clothing and shelter. Most of us even know we need sunshine. But most people don't know that a major other factor belongs on our list of essentials: one another. It is as scientifically proven as is one's need for vitamin C. Only here the 'C' stands for *connection*".

In fact, the process of communication involves the sending and receiving of messages through words as well as without words, while the outcome of communication (or the 'product') determines the meaning of verbal and non-verbal messages. Clearly, we do not communicate *to* others, but *with* them. Therefore, it is fair to say that communication may be viewed as both a process and a product with the goal of sharing a common idea. It is important to observe at this point that, communication is a kind of behaviour, and behaviour communicates. Such behaviour frequently produces results—often, though not always, favourable.

During verbal communication, we use words to which some symbols have been assigned and expect that everyone involved will share the same interpretation of these words. However, communication often gets its breath of life from messages not involving words or speech. In fact, people often seem to have more faith in non-verbal cues than they do in verbal—both spoken and written—messages. For instance, if a person says one thing but transmits a conflicting message non-verbally, listeners will almost invariably tend to believe the non-verbal signal.

Non-verbal communication refers to the sending and receiving of wordless messages conveyed through such means as gestures, body movements, facial expressions, tones of voice, colours, spaces, and styles of dressing. The look in one's eyes, the wrinkles on one's forehead, the curve of the lips and the movements of the head and hands are reflections of one's mood, thoughts, and feelings. Even silence may sometimes speak more loudly and clearly than words. On the other hand, using appropriate gestures and facial expressions to reinforce what one wants to communicate adds to its impact. This happens because listeners tend to process non-verbal cues automatically and almost unconsciously.

Clearly, non-verbal communication can aid or affect the efficacy of verbal communication. Non-verbal communication broadly covers the seven components listed below:

1. Body language
2. Kinesic communication
3. Proxemic communication
4. Haptic communication
5. Paralinguistic communication
6. Chromatic communication
7. Chronomatic communication

Few would challenge the fact that we communicate almost incessantly with the external world and keep sending out non-verbal messages *all the time,* knowingly or unknowingly. According to an estimate, there are over 700,000 forms of nonverbal communication. Therefore, it makes sense for us to become more aware not only of *what* we are communicating, but also of *how* we are communicating and, most importantly, of how we *look* while communicating. We must become aware of our gestures and postures, our body movements (kinesic communication), our space language (proxemic communication), our touch behaviour (haptic communication), our voice modulation (paralinguistic communication), our dress sense and selection of colour (chromatic communication), and our time sense (chronomatic communication).

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Noel Deerr Gold Medal Award of the Year 2012 – 2013

We are pleased to receive the joint ***Noel Deerr*** Gold Medal Award of the Year 2012–2013 for our research paper titled "Vertical Business Integration: A Logical Prospective Evolutionary Step for Sugar Industry in India" presented under management section in 71st STAI (Sugar Technologists' Association of India) convention held in Hyderabad, India. The paper was written by Dr. Vinay Sharma, Dr. Rajat Agrawal, Faculty Members, Anita Sengar, Ritika Mahajan and KumKum Bharti Research Scholars, Department of Management Studies, Indian Institute of Technology, Roorkee.

STAI annually honour academicians and scientists with this award those who have made phenomenal contribution in the field of agriculture, engineering & chemical engineering, manufacturing, management, general and by-products

The paper discusses the growth strategies for the sugarcane processors by harnessing the opportunities present after vertical integration. The paper tends to justify the logic of the vertical integration in association with the sugar industry, not only because of the reason that the industry has systematically adopted horizontal integration, but also because of the reasons such as the strength of its buyers, which amongst all prominently belong to the business category. Paper, also, proposes a logical augmentation of the entire value chain, while keeping intact the sanctity of the participants.

Dr. Vinay Sharma receiving the Gold Medal and the Certificate from Shri Rahul Bhatnagar, Principle Secretary, Sugar Industries and Cane Development Department, Government of Uttar Pradesh, Lucknow

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