ISSN 2250 - 1975

IJACM

INTERNATIONAL JOURNAL OF ADVANCES IN COMPUTING AND MANAGEMENT

VOLUME-7
NUMBER-2
JULY-DECEMBER 2018

Published By:

DR. D. Y. PATIL PRATISHTHAN'S
D. Y. PATIL INSTITUTE OF MASTER OF COMPUTER APPLICATIONS AND MANAGEMENT
SEC. NO. 29, AKURDI, MAHARASHTRA, INDIA.
Website: www.dypimca.ac.in
Email: - research@dypimca.ac.in, enquiry@dypimca.ac.in

INTERNATIONAL JOURNAL OF ADVANCES IN COMPUTING AND MANAGEMENT

ISSN 2250 – 1975 VOLUME 7 NUMBER 2 JULY-DECEMBER 2018

Contents

Machine Learning for Big Data Analysis with Parallel Processing

Ms. Poonam G. Sawant
Research Student, SPPU, Pune, India

Dr. Abhijeet Kaiwade
Research Guide, SPPU, Pune, India

Abstract

Big data evolution effects positively by discovering insights and improving decision making to expand business. In every minute variety of big data is generated at high speed and in large volume referred as big data. Storage, search, curation, distribution, transfer, analysis and visualization are the major challenges of big data. Several traditional data analytics have been implemented in different eras for data analysis. But these approaches are unable to handle big data. At present parallel processing with Machine Learning is an emerging trend to handle such kind of data. Hadoop is a hottest parallel processing framework and machine learning is a knowledge discovery technique for intelligent decision making. In this paper we have focused on machine learning and parallel processing as a primary element for extracting true value from big data.
Keywords: Parallel Processing, Machine Learning, Hadoop, Distributed File System, MapReduce

Introduction

Data analysis and prediction are important tasks for improving decision making and expanding business. A Lot of data analysis techniques and methods are developed and implemented successfully since last decades. But today the data is growing out of the boundaries due to adoption of internet, social media, mobile phones and sensing devices. 90 percent of the data today is generated within last 2 years which is called as big data. [1] This massive data has tremendous potential in terms of business value, trends and patterns in various domains such as health care, biology, transportation, online advertising, energy management, and financial services. But, traditional approaches are struggling to deal with these massive data. [2]
Apache developed a high scale distributed and processing system called Hadoop to overcome the problems of traditional data analytics**.** It can store any kind of large scale data and can perform very sophisticated analysis of the Big Data [3] Machine learning with Big Data is different than regular machine learning. This paper presents use of machine learning algorithms on big data with Hadoop parallel processing framework.

Related Work

Till date many techniques and methods are successfully used for data analysis and prediction, but these techniques and methods are unable to process big data. In [8], author used big data technologies to process unstructured data. In this research work, they have processed unstructured data using MapReduce technique and the automatic prediction of user’s taste is done through collaborative filtering. According to authors, Map reduce is the most efficient technique for processing large volume of data and the application of collaborative filtering and sentiment analysis provides recommendation generation for any number of data provided as input.
In [9] Authors have introduced methods and applications of machine learning in big data. They mixed supervised and unsupervised algorithms to process crime data collected from social networking sites whereas in [10] authors provided appropriate platforms for analysis of big data with machine learning like mahout and spark.
Machine learning and parallel processing is an effective combination for data analysis and prediction. We can discover valuable insights from the massive amount of data by applying various ML algorithms on Hadoop platform.

Hadoop Solution for Big Data Analysis:

Hadoop is a popular and widely used open source MapReduce implementation and used by IBM, Yahoo!, Amazon and Facebook. It was developed by Doug Cutting. The first version was available by the end of 2005. In April 2008, Hadoop was able to sort a terabyte of data on a 910 node cluster in 209 s. The same year in November, Google run 1000 node cluster in 68s. Hadoop is now a top – level apache project. Following diagram depicts the Hadoop ecosystem. [4] The main components of Hadoop are,

1. **HDFS:** Is a Hadoop distributed file system designed for storage and replication. HDFS is extremely fault-tolerant and can be easily deployed on low-cost hardware. HDFS provides high throughput access to application data and is suitable for applications that have large data sets [5]

2. **MapReduce:** MapReduce is a programming model for processing massive amount of data sets with a parallel and distributed algorithm. MapReduce divides processing into two phases: the map phase and the Reduce phase with key-value pairs as input and output and two functions: the Map function and the Reduce function. [6]

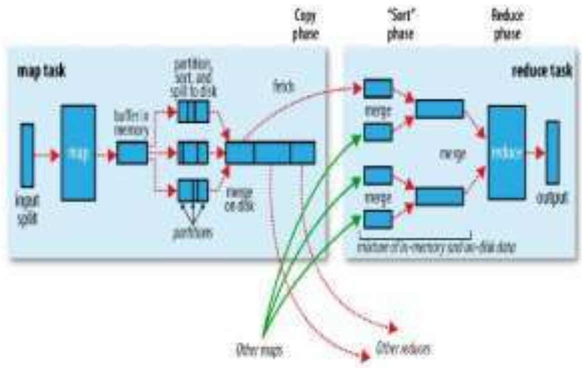

Fig.1: MapReduce Programming Model

With a simple logic of count process we can analyze large amount of data for digging important variable for decision making.

Machine Learning Algorithms

Big Data is the hottest trend at the moment; machine learning is incredibly powerful to make predictions.

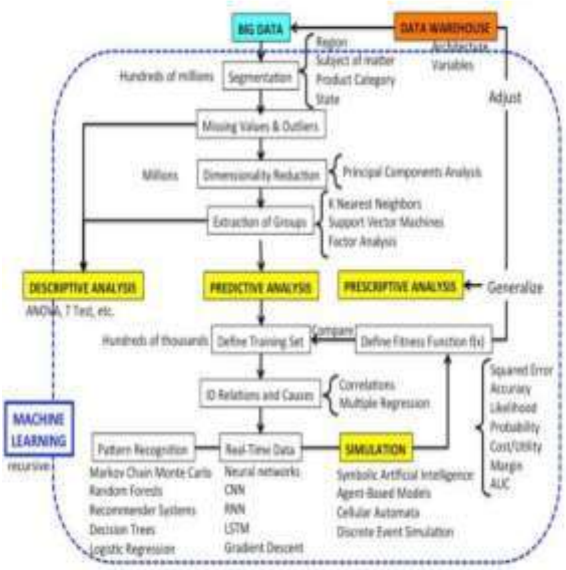

Fig.2 Big Data Applications of Machine Learning Algorithms

Machine Learning is classified into two groups.

1. Supervised Learning
2. Unsupervised Learning

Supervised Learning includes target variables which is to be predicted from independent variables. Examples of this category are Regression, Decision Tree, Random Forest, KNN, Logistic Regression etc.[7]
Unsupervised Learning do not have any target or outcome variable to predict / estimate. It is used for clustering population in different groups. Examples are Apriori algorithm, K-means.[7]
Machine Learning algorithms can be worked on big data to develop Descriptive Analysis, Predictive Analysis and Prescriptive Analysis as shown in figure.2.

Proposed Methodology

Proposed methodology is described in following steps and overall process is explained in figure.3

1. Loading Data Set in HDFS
2. Extracting Key:Value Pair and storing back to HDFS using MapReduce Framework
3. Selecting Machine Learning Algorithm and Extracting Feature Attribute
4. Dividing Data Set into Training and Testing and applying selected Machine Learning Algorithm.
5. Finding Accurate Model

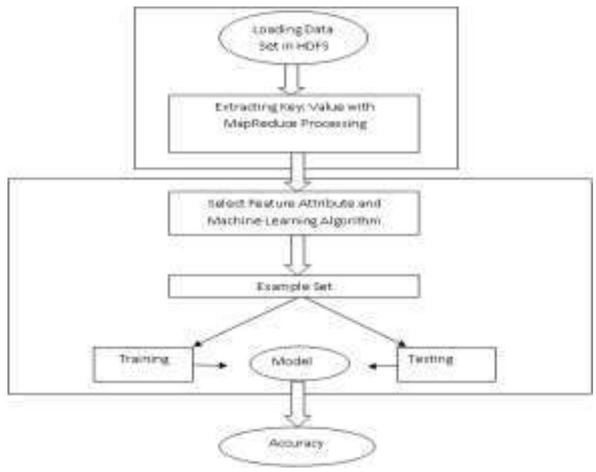

Fig.3 Proposed Methodology

Conclusion

As big data is rapidly growing in all significant domains, learning of this massive data brings a significant opportunities and transformative potential. Mining of big data contains high potential information which is useful for organizations for decision making. As traditional analytics facing problem to mine this data, Hadoop is the solution with parallel processing concept. MapReduce is a simple processing programming model which is based on word count paradigm. Machine Learning algorithms are powerful tools for calculating and predicting true value from the large amount of data sets. Machine learning for big data analytics with parallel processing model gives better insights of big data. In this paper we have proposed a methodology to find out accurate predictive model for big data analysis. Future work is to implement this system to drawn the expected results.

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International Journal of Advances in Computing and Management, 7(2) July- Dec 2018,
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Neural Network Model for soft computing

Prof. Dipali Patil
JSPM's Jayawantrao Sawant college of Engineering,
Hadapsar ,Pune 28,Maharashtra ,India
deepapatil2006@gmail.com

Prof. Kshirsagar Sarika
JSPM's Jayawantrao Sawant college of Engineering,
Hadapsar ,Pune 28,Maharashtra ,India
kshirsagar.sarika@yahoo.com

Abstract:

This paper introduces neural networks for soft computing. We have also explained and demonstrated various types of neural networks, neural network applications in medicals and its history. We explained interconnection between artificial intelligence and real things also investigated it. Finally, the architectural models involved are presented and demonstrated.

Keywords: Intelligent systems, Neural Networks, soft computing, Artificial intelligence

I .Introduction

Soft computing defines in computer science where problem solution is unpredictable, not certain and it can be in between 0 and 1.

In last few decades computational approaches could model and specifically investigate only comparatively simple systems. Many multifaceted systems arising in human science, management, medicine and various fields are remained difficult to conventional analytical and mathematical research.

On the other hand, it ought to be pointed out that simplicity and complexity of systems are relative, and many usual mathematical models have been both tough and very creative. Soft computing deals with ambiguity, uncertainty, partial truth, and approximation to achieve probability, toughness and less solution cost. At the same time it forms the basis of a significant amount of machine learning techniques. Recent trends tend to involve evolutionary and multitude intelligence based algorithms and biological computation.

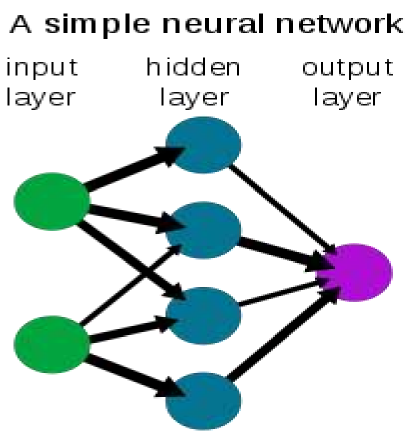
Difference between soft computing and possibility are the Possibility is used where to solve the problem when we don't have enough information, where soft computing is used where when we don't have enough information about the problem itself. These kinds of problems invent in the human mind with all its uncertainties, prejudice and emotions. For example we can be determining a proper temperature for a room to make people feel relaxed. Soft computing is leaning towards the investigation and design of intelligent systems. It is based on artificial neural networks.

Neural networks have a unique history in the area of technology. Unlike a lot of technologies today which either instantly fail or are instantly popular, neural networks for popular for a short time, took a two-decade break, and have been popular every since.

In this paper we summarised commonly used techniques to solve difficult problems with soft computing methods using neural networks.

A. Neural Technique In Soft Computing

An Artificial Neural Network is an information processing pattern where that is motivated by the way nervous systems in biological , such as the brain process information. The key element of this pattern is the original arrangement of the information processing system. It is collected of a large number of highly organized processing elements (neurones) working in agreement to solve definite problems. An Artificial Neural Networks, like people, learn by example. An Artificial Neural Network is configured for a specific application, such as pattern recognition or data classification, through a learning process. Learning in biological systems involves adjustments to the synaptic associations that exist between the neurones. This is true of An Artificial Neural Networks as well.



II. Architecture of a Neural Network

Artificial neural networks are composed of a set of neurons, joined together by synapses. Neurons perform a simple computational task, generally a basic yes/no decision. Synapses link neurons together by linking their inputs and outputs.

In programming terms, a synapse is an object which links one neuron connected to its input to another connected to its output. A neuron is a slightly more complex object which can be connected to one or more input synapses and one or more output synapses. The structure of any neural network is therefore defined by the way in which various neurons and synapses are linked together.

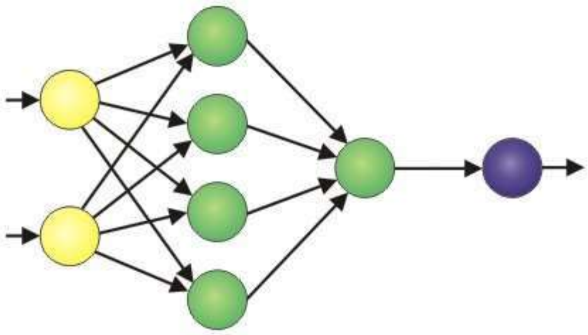


Figure 1: Neural network architecture is defined by the way in which neurons (circles) are connected together by synapses (lines)

Now we have a basic understanding of how a neural network's structure is defined, we can start to think about how such a network can be used to perform computation or in the case of a natural neural network, think. Natural neural networks are constructed from neurons: cells which connect together and transmit electrical impulses to and from. The electrical activity of a neuron is dependent on the electrical activity of the neurons which connect to it. In the case of artificial neural networks we use real numbers instead of electrical activity. Neurons output a value, which is passed to other neurons via synaptic connections and (together with values from any number of other neurons) determines the output of those neurons. Synaptic connections are one-way, so values generally propagate through the network in one direction.

Nerve cells, connected to sensory organs such as the eyes or taste buds form the inputs to natural neural networks and similar nervous connections to muscles and such like form the outputs. In an artificial neural network we connect the inputs and outputs to some form of interface software. This software may in turn connect our neural network to sensors, motors or servos or it may link it to a database of stock-market or weather data. Regardless of what data we're using or what problem we're trying to solve, our neural network will accept a set of real numbers as input and return a set of real numbers as output.

A. *Inputs and Outputs:* Special input neurons (the yellow blobs in figure 1) are used as place holders in the network; input values from our software interface are inserted through the input neurons which are connected to other neurons in the network via synapses. Neurons in the network are generally arranged in layers – groups of neurons which are linked only to similar groups on their left and right – the input neurons form the first such layer. Values from the input layer are fed from left to right through various hidden layers. The last layer of neurons in the network is known as the output layer; the output values of neurons in the output layer are the outputs of the network. This layered architecture is inspired directly by the design of the brain, in which layers of neuron cells are arranged in an onion-skin pattern.

B. *Neural Networks:* An artificial neural network (briefly: neural network) is an analysis paradigm that is roughly modelled after the massively parallel structure of the brain. It simulates a highly interconnected, parallel computational structure with many relatively simple individual processing elements. It is known for its ability to deal with noisy and variable information. There are five areas where neural networks are best applicable

1. Classification.
2. Content Addressable Memory or Associative Memory.
3. Clustering or Compression.
4. Generation of Sequences or Patterns.
5. Control Systems.

Neural networks are very good at a wide variety of problems, most of which involve finding trends in large quantities of data. They are better suited than traditional computer architecture to problems that humans are naturally good at and which computers are traditionally bad at? Image recognition, making generalizations, that sort of thing. And researchers are continually constructing networks that are better at these problems.

III. Applications of neural networks

1. Character Recognition - The idea of character recognition has become very important as handheld devices like the Palm Pilot are becoming increasingly popular. Neural networks can be used to recognize handwritten characters.

2. Image Compression - Neural networks can receive and process vast amounts of information at once, making them useful in image compression. With the Internet explosion and more sites using more images on their sites, using neural networks for image compression is worth a look.

3. Stock Market Prediction - The day-to-day business of the stock market is extremely complicated. Many factors weigh in whether a given stock will go up or down on any given day. Since neural networks can examine a lot of information quickly and sort it all out, they can be used to predict stock prices.

4. traveling Saleman's Problem - Interestingly enough, neural networks can solve the traveling salesman problem, but only to a certain degree of approximation.

5. Medicine, Electronic Nose, Security, and Loan Applications - These are some applications that are in their proof-of-concept stage, with the acceptation of a neural network that will decide whether or not to grant a loan, something that has already been used more successfully than many humans.

6.Miscellaneous Applications - These are some very interesting (albeit at times a little absurd) applications of neural networks.

IV. Conclusion

Artificial intelligence applications in addition to hardware applications, the more common use are the software applications. In recent years, there will be more and more relevant applications in the financial, medical fields.

Financial and medical fields both have some characteristics: they are equally has uncertain environment, complex factors and a large amount of data. For the analysis of these data also need concept of Fuzzy to present the result. In my opinion, the future of artificial intelligence that the system should be applied on the things in life, such as aviation, transportation, education, etc. Mention to hardware applications, there may be one day when we actually produce the robot; we will begin to worry about ethical and moral issues.

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A Survey of Security Issues in Trust and Reputation System for e-commerece

Ms. Shalini A Mali
Research Scholar SPPU
mali_shalini@yahoo.com

ABSTRACT:-

Trust and reputation systems are always subject to attacks if an adversary can gain a benefit in doing so. The list of different attacks against them is extensive. Assaults like knocking, newcomer, Sybil, intrigue and numerous more are liable to ebb and flow inquire about. Some of them introduce techniques that permit distinguishing ill disposed conduct, henceforth giving security against assaults. Be that as it may, brilliant foes will adjust their conduct procedures to the current insurance systems and sidestep a portion of the security techniques. In this paper, we talk about the alternatives accessible to foes for accomplishing their objective: Gaining an advantage. For this, we examinations the outstanding assaults and propose security techniques which give protection or insusceptibility against them whenever, henceforth freely from the astuteness or system of enemies. Our second concentrate is to expound on the issue of dependably recognizing a foe among executing members and its effect on conceivable security strategies. Web based business is purchasing and offering products and ventures over the Internet. Internet business is a piece of ebusiness as determined in. E-business is a structure that incorporates not just those exchanges that inside on purchasing and pitching products and ventures to create income, yet in addition those exchanges that help income age. These exercises incorporate producing interest for products and ventures, offering deals support and client benefit, or encouraging correspondences between business accomplices. One of the basic achievement components of web based business is its security. Without the confirmation of security, web based business may not work ordinarily. And it is a complexity issue, because ecommerce security relates to the confidence between sellers and buyers, credit card and extremely sensitive personal information. Therefore, the security of e-commerce depends on a complex interrelationship among applications platforms, database management systems, and software and network infrastructure and so on. Any single weakness can jeopardize the ecommerce security.

Keywords: Trust Model, Adversary Security Methods

Introduction

Today's trust and reputation systems are widely used in the field of ecommerce. These systems are based on trust and reputation models with diverse mathematical approaches. The management of memberships and presentation of trust and reputation relations is usually the task of a trusted third party in centralized systems. In the absence of a, each member is responsible for managing the trust and reputation presentation by itself. This circumstance happens in completely decentralized frameworks. Rating based models speak to the most normally utilized reason for trust and notoriety frameworks. They are utilized as a part of internet business stages, for example, eBay, Amazonian numerous other online market or item audit destinations.
More refined methodologies, for example, Bayesian likelihood, fluffy rationale or models in view of discrete esteems do exist, yet have not yet been incorporated broadly in business frameworks. This is most likely because of the way that these models are excessively badly designed, making it impossible to use for the normal client. One way to deal with reduce this bother is given by Rise giving representation to these clients Some specialists included techniques in their models to distinguish antagonistic conduct which provided some type of assurance against one or a few assaults impacting the notoriety of different individuals. These techniques depend on reducing. Here, suppositions of individuals which don't coordinate the transcendent assessment inside the trust framework are either overlooked or decreased in their criticalness. As we would like to think, this ought not to occur in light of the fact that it is practically difficult to check whether the marked down sentiment is from an enemy or legit part. For instance, in reasonable appraisals for level board TV's were utilized as reason for the assessment. 50 foes were entrusted to help two level board evaluations while decreasing the rating of two others. The outcomes demonstrated that the foes were distinguished and their effect on the appraisals was unimportant. The issue is, that in another situation the past foes may now be straightforward raters. The outcome will bathe identical in the event that we simply switch the description “honest rater" with “adversary". Presently, fair raters will be distinguished as foes.
Numerous security techniques just work if the suspicion is right about who the enemy and who the fair part is. Think about two individuals, each appraising a Item. The rating of part An is high, expressing that all desires are metro outperformed. Part B gives a low appraising, expressing that the item is broken and has a terrible quality. If previous ratings of other members were high, then member's rating could be considered malicious. With low previous ratings, member might be identified as an adversary, damaging the reputation of the product

or manufacturer. However, both members' ratings could be justified. Member received a product which was perfectly fine, while member B was less lucky. The product had several manufacturing errors.
Without information about the complete transaction, communication an evaluation process, a correct decision about which member is the adversary is almost impossible.
It is due to this problem that we advise that all opinions should be accepted as given.
In this paper, we identify security methods which do accept all opinions without reducing their influence based on assumptions regarding malicious behavior.

Review of Literature

QIN Zhiguang, LUO Xucheng, GAO Rong(2004) Trust management systems manage the trust relationships between business partners by maintaining the trustlevel of the e-commerce participants and make them available to potential ecommerce customers when needed. The trust level is derived from feedback ratings submitted by the trading partners after the successful completion of the transactions. The submitted feedbacks are analyzed, aggregated, and made publicly available to the interested parties
Cetin K. Koc,(1999) The accuracy of trust value means the correctness or truthfulness of trust information. This also means the estimation of trust value of users is accurate at the time of evaluating. Users have no control over the accuracy of the trust value given by the trust management system. Much of the information needed to compute trust value can be gathered from various sources as mentioned earlier. This information could be accurate or could be designed to mislead the user into falsely trusting the provider.
Corbitt,B.J.(2003) As e-commerce customer accessing information relies on online trust management system, supporting the availability, integrity and confidentiality of this information is crucial. It is difficult, if not impossible, to complete a transaction without revealing some personal data, such as shipping address, billing information, or product preference. Users may be unwilling to provide this necessary information or even to browse online if they believe their confidential information is invaded or threatened.
Aladwani.A,(2003) It security components to determine the trustworthiness of ecommerce participants to helps online customers to decide whether or not to proceed with a transaction. Based on this framework, we proposed an approach for filtering out malicious feedbacks and a trust metric to evaluate the trustworthiness of service provider.
Sharma A & Yurcik.W (2004) The accuracy of trust value means the correctness or truthfulness of trust information. This also means the estimation of trust value of users is accurate at the time of evaluating. Users have no control over the accuracy of the trust value given by the trust management system. Much of the information needed to compute trust value can be gathered from various sources as mentioned earlier.
Kim C, (2010) Trust management systems should have the capabilities for cloud provider to present their service capabilities and allow participants to make assessments and decisions regarding the potential transactions. It is important for a trust management system to have a specific mechanism that accurately evaluates the trustworthiness of cloud providers. This framework incorporates the basic security measures and trust evaluation components that filtering all ratings.
Joseph P.T, S.J (2008) Security in a cloud environment requires a systemic point of view, from which security will be constructed on trust, mitigating protection to a trusted third party. In recent years many researchers have focused on trust related issues, the general trend in trust management system is to consider all feedbacks as accurate
S. R. S. KESH, AND S. NERUR,(2011) In this paper, we propose a multi-faceted trust management system architecture for cloud computing marketplaces, to support customers in identifying trustworthy cloud providers. This paper presents the important threats to a trust system and proposed a method for tackling these threats. It described the desired feature of a trust management system. It security components to determine the trustworthiness of ecommerce participants to helps online customers to decide whether or not to proceed with a transaction.
D. Berlin,(2007) In this paper, we discuss the options available to adversaries for achieving their goal: Gaining a benefit. For this, we analyses the well-known attacks and propose security methods which provide resistance or immunity against them at any time, amongst transacting participants and its influence on possible security methods.
Research Methodlogy:-
Security issues of Electronic Commerce:- The Internet technology is creating huge opportunities to expand existing businesses and forming what is called New Economy, Worldwide Economy, or Electronic-Commerce. Online business depicts business exchanges, client administrations, requesting, conveyance and installment, and intra-business errands that make utilization of general society web and the advanced arranged processing condition that connections associations and people in business, industry, government, and the home. In any case, numerous associations are threatened by the new advancements, uncertain of how to exploit them, and thinking about how these advances will bolster existing interests in abilities and frameworks.

Furthermore, this new sort of economy or business accompanies a ton of difficulties particularly those identified with trust and security issues. In this paper, the diverse sorts of security issues confronting internet business frameworks will be displayed and arranged, what's more, general rules and measures on how to deal with these security issues to protect e-commerce systems will be presented and discussed.

Security and Trust:- In a general sense, the purpose of security mechanisms is to provide protection against malicious parties. In this sense there is a whole range of security challenges that are not met by traditional approaches. Customary security instruments will normally shield assets from noxious clients by confining access to just approved clients. In any case, much of the time we need to shield ourselves from the individuals who offer assets with the goal that the issue in certainty is switched.

Data suppliers can for instance act misleadingly by giving false or deluding data and customary security systems can't ensure against this kind of risk. Trust and notoriety frameworks then again can give insurance against such dangers. The distinction between these two ways to deal with security was first portrayed by Rasmussen and who utilized the term hard security for conventional instruments like confirmation and access control, and delicate security for what they called social control mechanisms in general of which trust and reputation systems are examples.

ECOMMERCE SECURITY: - E-commerce Security is a part of the Information Security framework and is specifically applied to the components that influence online business that incorporate Computer Security, Data security and other more extensive domains of the Information Security structure. Online business security has its own specific subtleties and is one of the most noteworthy noticeable security segments that influence the end client through their day by day installment association with business. Today, protection and security are a noteworthy worry for electronic advances. M-business shares security worries with different innovations in the field. Security concerns have been discovered, uncovering an absence of trust in an assortment of settings, including business, electronic wellbeing records, e-enrollment innovation and long range interpersonal communication, and this has Straight forwardly impacted clients. Security is one of the chief and proceeding with worries that limit clients and associations drawing in with online business. Web based business applications that handle installments (web based keeping money, electronic exchanges or utilizing check cards, MasterCard's, PayPal or different tokens) have more consistence issues, are at expanded hazard from being focused than different sites and there are more prominent results if there is information misfortune or adjustment. Internet shopping through shopping sites having certain means to purchase an item with protected and secure the online business industry is gradually tending to security issues on their interior systems. There are rules for securing frameworks and systems accessible for the web based business frameworks work force to peruse and actualize. Instructing the shopper on security issues is still in the infancy stage but will prove to be the most critical element of the e-commerce security architecture. Trojan horse programs

Digital Signatures and Certificates: - Digital signatures provide the requirement for authentication and integrity. A sending message is run through a hash function and new value is generated known as message digest. The message digest and the plain text encrypted with the recipient's public key and send to recipient. The recipient decrypts the message with its private key and passes the message through the supplied hash algorithm. Digital certificate are also used for security purposes. CA issues an encrypted digital certificate to applicant that contains the applicant's public key and some other identification information. The recipient of an encrypted message can use the CA public key to decode the digital certificate attached to the receiving message that's verify it as issued by the CA and then obtains the sender public key and identification information store within the certificate. Digital certificate contains the following information

i. Certificate holder name ii.
ii. Certificate Expire data
iii. Certificate holder public key
iv. Signature of authority

An algorithm provides the capability to generate and verify signatures. Signature generation makes use of a private key to generate a digital signature

SECURITY CONTROL MEASURES: - There are some detailed security control measures in the ISO 7498-2 Standard lists. For example, there are involving authentication, get to Control, information secrecy information trustworthiness and non-revocation. PC security specialists broadly acknowledge this order. What's more, they are likewise prescribed by the creators great control measures. The danger operator, risk method and safety efforts are appeared in Fig.1. We can utilize Fig.1 to characterize dangers and safety efforts to go up against these dangers in web based business. For instance, get to control is one of the safety efforts. It can confront the dangers that might be caused by an unapproved client through equipment. Absolutely, there are mixes with operators, danger strategies, and safety efforts. Notwithstanding, not these blends are accessible. We simply use this three-dimensional view for a better security risk management.

Security Challenges:-

・Internet was never designed with security in mind.

・ Many companies fail to take adequate measures to protect their internal systems from attacks.

・ Security precautions are expensive {firewalls, secure web servers, encryption mechanisms.

・Security is difficult to achieve.

Security Risks:-

1- Bugs or miss-configuration problems in the web server that can cause the theft of confidential documents
2- Risks on the Browsers' side i.e. breach of user's privacy, damage of user's system, crash the browser etc
3- Interception of data sent from browser to sever or vice versa. This is possible at any point on the pathway between browser and the server i.e. network on browser's side, network on server's side, end user's ISP (Internet Service Provider), the server ISP or either ISP's regional access.

Cooperative Responsibility:- Cooperative responsibility means that the success of ecommerce in terms of security involves the responsibility of different actors who complement each other rather than a single responsibility. Security conditions Part of this responsibility lies in management's commitment to the necessary expenditure on security. Websites that present such information to their users so that they can verify it before conducting their transactions encourage users to feel that the companies are committed to their customer's security. The government can play a major role in ecaned accountable for security violations. It is the education system's responsibility to increase individual awareness and perception by enriching people's knowledge and experience of security and the use of ecommerce as well as propagating a culture of using eservices to carry out activities online.

Privacy policy:- According to a study released by commerce " Net and Nielsen Media Research", More than 2 out of each five individuals in North America are currently Internet clients and the web is getting to be as essential piece of every day existence Without a through protection security arrangement, it's unrealistic to burn through cash in a capable and cost – powerful way. Build up a protection security arrangement that incorporates characterizing the affectability of data, the introduction of the association if that data was probability of those dangers getting to be reality.

Security polices design the way in which an organization gathers, utilizes, ensures information, and the decisions they offer customers to practice rights when their own data is utilized. The premise of this approach, purchasers can decide if and to what degree they wish to make data accessible to organizations. Emit key cryptography, transposition and substitution. Transposition figure scrambles the first message by changing characters arrange in which they happened. Where as in substitution figure, the first message was encrypted by replacing their characters with other characters in both types, both the sender and receiver share the same secret keys.

CONCLUSIONS:-

In banks all the functions and activities are safe by using security issues. In this examination in saving money administration open record and check the adjust and do any exchange and erase any record safely on the off chance that we know the secret word of any client. The principle highlight of the exploration that the information is sheltered in keeping money administration for long time and open any record after quite a while and . This safe saving money framework programming is getting to just by the bank and by client. A client can't get to the next client's record in e-bank framework. Solid secret word is utilized to secure financial balance of any client rather than feeble watchword on the grounds that solid secret key isn't effortlessly recollected and utilized. Criticism can be acquired effortlessly as web is virtual in nature. Client dedication can be pick up. Individual consideration can be given by bank to client additionally quality administration can be served. Some examination has been composed on study .The respondent need to answer the inquiries all alone. A few people fulfill claim our perspectives. In any case, a few people groups were not fulfills with us. Respondents have adequate time to give well throughout answers. Ecommerce is widely considered the buying and selling of products over the internet, but any transaction that is completed solely through electronic measures can be considered e-commerce. Day by day E-commerce and M commerce playing very good role in online retail marketing and peoples using this technology day by day increasing all over the world. E-commerce security is the protection of e-commerce assets from unauthorized access, use, alteration.

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International Journal of Advances in Computing and Management, 7(2) July- Dec 2018,
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The role of Digital and Social Media Marketing in Consumer Behavior

Ms. Hiral D. Patel,
Research Scholar, Calorx Teachers' University
patel_hiral811@yahoo.co.in

Dr. Kamaljit I. Lakhataria,
Professor, Gujarat University
kamaljit.ilakhataria@gmail.com

Abstract: This paper begins with an explanation of terminology that defines social media marketing, followed by a discussion of the four main themes found within current research studies: Virtual Brand Communities, Consumers Attitudes and Motives, User Generated Content, and Viral Advertising. This article reviews recently published research about consumers in digital and social media marketing settings. Five themes are identified: (i) consumer digital culture, (ii) responses to digital advertising, (iii) effects of digital environments on consumer behavior, (iv) mobile environments, and (v) online word of mouth (WOM). Collectively these articles shed light from many different angles on how consumers experience, influence, and are influenced by the digital environments in which they are situated as part of their daily lives. Much is still to be understood, and existing knowledge tends to be disproportionately focused on WOM, which is only part of the digital consumer experience. Several directions for future research are advanced to encourage researchers to consider a broader range of phenomena. In today's technology driven world, social networking sites have become an avenue where retailers can extend their marketing campaigns to a wider range of consumers. Defines social media marketing as a The tools and approaches for communicating with customers have changed greatly with the emergence of social media; therefore, businesses must learn how to use social media in a way that is consistent with their business plan this is especially true for companies striving to gain a competitive advantage. The second edition builds on the wealth of European and International examples, cases, and research in the first edition, offering more integration of European content. It has also been fully updated with the latest research to ensure that it continues to be seen as the text covering the very latest services marketing thinking. In addition, the cases section has been thoroughly examined and revised to offer a range of new case studies with a European and global focus. The online resources have also been fully revised and updated providing an excellent package of support for lecturers and students. This review examines current literature 2 that focuses on a retailer's development and use of social media as an extension of their marketing strategy. This phenomenon has only developed within the last decade, thus social media research has largely focused on defining what it is through the explanation of new terminology and concepts that makeup its foundations, and exploring the impact of a company's integration of social media on consumer behavior.

KEYWORDS: Digital marketing communication, consumer decision making process, digital technology;

INTRODUCTION

In today's technology driven world, social networking sites have become an avenue where retailers can extend their marketing campaigns to a wider range of consumers. Chi (2011, 46) defines social media marketing as a "connection between brands and consumers, [while] offering a personal channel and currency for user centered networking and social interaction." The tools and approaches for communicating with customers have changed greatly with the emergence of social media; therefore, businesses must learn how to use social media in a way that is consistent with their business plan (Mangold and Faulds 2099). This is especially true for companies striving to gain a competitive advantage. This review examines current literature that focuses on a retailer's development and use of social media as an extension of their marketing strategy. This phenomenon has only developed within the last decade, thus social media research has largely focused on (1) defining what it is through the explanation of new terminology and concepts that makeup its foundations, and (2) exploring the impact of a company's integration of social media on consumer behavior. This paper begins with an explanation of terminology that defines social media marketing, followed by a discussion of the four main themes found within current research studies: Virtual Brand Communities, Consumers Attitudes and Motives, User Generated Content, and Viral Advertising. 2 Although social media marketing is a well-researched topic, it has only been studied through experimental and theoretical research; studies never precisely describe the benefits retailers gain from this marketing tactic. In reviewing the rich plethora of multi-disciplinary literature, it is has become clear that studies are focusing on describing what social media marketing is as well as examining what factors affect consumer behavior relative to social networking. Despite the initial progress made by researchers, 3 development in this area of study has been limited. Research needs to expand by providing a deeper understanding of the longterm promotional gains retailers obtain from social media marketing. More formalized studies are also needed to progress beyond theorized or predicted outcomes in order to gain knowledge of real life applications. This review of literature touches upon the gaps that currently exist within social media marketing research and points out the need for future studies to explore the benefits gained by marketing on social networking sites, especially for small retailers.

REVIEW OF LITERATURE

Bampo, Mauro, Michael T. Ewing, and Mark Wallace (2008). Integrated marketing communication can produce stronger message consistency and greater sales impact. It forces management to think about every way the customer comes in contact with the company, how the company communicates its positioning the relative importance of each vehicle and timing issues.

Bourlakis, Michael, Savvas Papagiannidis, and Feng Li. (2009). A revolutionary development in the shift to the strategic concept of marketing is in the marketing objective – from profit to consumer benefits. There is a growing recognition that profits are a reward for performance defined as satisfying customers in socially responsible or acceptable ways.

Campbell, Colin, Leyland F. Pitt, Michael Parent, and Pierre R. Berthon. (2011). Social media has advanced from simply providing a platform for individuals to stay in touch with their family and friends. Now it is a place where consu ers can learn more about their favorite companies and the products they sell. Marketers and retailers are utilizing these sites as another way to reach consumers and provide a new way to shop.

Casaló, Luis V., Flavián Carlos, and Miguel Guinalíu.(2008). "as media-blitzed, ad-cynical, time-poor, channelflicking audience living in a fast-paced, attention-challenged world" The fact is that due to fast pace of technology, and globalization of the world, consumer behavior around the world is changing. Today customers have more control over what to see, and read and therefore IMC need to tailor the organization campaign as per the requirements of the market.

Hill, Shawndra, Foster Provost, and Chirs Volinsky.(2006). IMC tries to maximize the positive message and minimize the negative once and communicate them using the proper tools. A successful IMC program uses the combination of the 4 right tools, define their role and coordinate their use. The company should use the contact method that offers the best way of delivering the message to the target audience.

Kaplan, Andreas M. and Michael Haenlein. (2010). Concepts like convergence have come in to bring more versatility in the communication mediums being used. Convergence represents a paradigm shift – a move from medium specific content towards content that flows across multiple media channels, towards the increased interdependence of communication systems, towards multiple ways of accessing media content, and towards ever more complex relations between top-down corporate media and bottom-up participatory culture.

Hassanein, Khaled and Milena Head. (2005). Reflects the same concept As per the author, IMC is the concept and process of strategically managing audience-focused, channel-centered and 27 results-driven brand communication programmers over time. This definition is a bit more specific and along with strategy and accountability it emphasizes specifically on communication being channel-centered and audience-focused.

Golan, Guy J. and Lior Zaidner. (2008). Digital marketing is a strategic business process used to plan, develop, execute and evaluate coordinated, measurable, persuasive brand communication programmers over time with consumers, customers, prospects, and other targeted, relevant external and internal audiences.

Harris, Lisa and Charles Dennis.(2011). The concept of integrating online & offline marketing to build success is one who time has come. While many companies still view their online & offline efforts as separate entities, savvy marketers are slowly realizing that success comes through integration through all channels to provide consumers with what they demand accessibility, choice & convenience.

Heinonen, Kristina. (2011). The idea of integrated marketing communication is to create consistency and synergy by combining marketing communication elements so that they support and enhance each other, to promote potential communication understandings.

RESEARCH METHODOLOGY:-

Online marketing is becoming a hot topic in every business sector, and gradually plays a truly important role in any company's multi-channel marketing strategy. It uses the Internet to deliver promotional marketing messages to consumers. It includes email marketing, search engine marketing, social media marketing, many types of 5 display advertising (including web banner advertising), and mobile advertising. Like other advertising media, online advertising frequently involves both a publisher, who integrates advertisements into its online content, and an advertiser, who provides the advertisements to be displayed on the publisher's content. Other potential participants include advertising agencies that help generate and place the ad copy, an ad server who technologically delivers the ad and tracks statistics, and advertising affiliates who do independent promotional work for the advertiser.

CONSUMER DIGITAL CULTURE Consumer digital culture research considers, quite deeply, the digital environments in which consumers are situated. A key aspect of this work has understood how 5 consumers' identities and self-concepts extend into digital worlds, such as work by Belk extended his prior work on the "extended self" to incorporate the digital environments in which consumers now situate themselves, which is an important piece of theory development because it considers concepts such as the ability for consumers to have multiple selves due to possessing multiple online "personas." Belk also suggests many areas for future research. Other research under this theme looked at more specific phenomena. McQuarrie et al. focused on fashion blogging as a means of documenting the "megaphone effect," which is the ability for regular consumers to access large audiences through digital/social media. This is an important effect and they discussed how bloggers go about building audiences and accumulating social (or cultural) capital through demonstrations of "good taste." In a social media setting this essentially means that a blogger makes recommendations that signal her expertise to others. This is in a specific setting, but has implications for understanding consumers' content-generation behaviors on social media more generally, since signaling positive personal attributes is likely a common motivation for posting certain things on sites like Facebook. Together, these articles make an important conceptual contribution around how we see consumers in a digital world, particularly by implying an expanded conception of what it is to be a consumer in today's digital world.

Advertising Digital advertising is a major topic in the marketing literature and, with respect to consumer behavior, considers how consumers respond to various aspects of digital ads. A number of recent articles considered behavioral aspects of digital advertising from various perspectives. One interesting perspective taken in a few articles was based around how 6 to overcome (assumed) psychological reactance due to personalization of digital ad targeting. Schumann et al. considered how negative 6 reactions to personalization could be overcome with normative reciprocity appeals (instead of utility appeals). Lambrecht and Tucker studied ad retargeting, which is when personalized recommendations based on prior webbrowsing history are made when a consumer returns to a website. Negative responses to retargeting are found, but this is mitigated when consumers' preferences have become more precise. Tucker found that personalized website ads are more favorably received when consumers have a higher perception of being in control of the personal/private information used for personalization, which directly corresponds to literature on psychological reactance and suggests a theoretical way forward for research into consumer digital privacy, which is lacking. Other articles have considered a variety of digital ad response aspects Luo et al. [16] looked at drivers of popularity for group-buying ads finding social influence (e.g., social proof due to others buying a deal) to be a major driver of deal popularity. Jerath et al. studied responses to search engine advertising, finding that when consumers search for less-popular keywords their searches are more effortful. Puccinelli et al. examined digital video ads (e.g., that run on sites like Hulu and YouTube), focusing on how TV show emotion interacted with ads' energy levels to affect consumers' responses. They find that affective matching between show and ad matters such that when consumer's experience "deactivating" emotions (e.g., sadness) it is harder to view energetic ads. Dinner et al. considered how digital display and search ads drive online and offline purchasing for a retailer, finding that digital ads are more effective than offline ads in driving online behavior. Finally, Goldstein et al. studied "annoying" (e.g., obtrusive, low quality) website ads and showed how they create economic costs for advertisers (i.e., waste) and cognitive costs for consumers.

Impacts of Digital Environments A still-emerging theme in recent years is how digital/social media environments impact consumer behavior the consequences can be thought of as environment-integral (i.e., digital environments influence behavior in those environments) or environment-incidental (i.e., digital environments influence behavior in other, unrelated environments). It is interesting to see how the various informational and social characteristics of digital/social environments, such as being exposed to other consumers' opinions (e.g., reviews) or choices (e.g., bids in online auctions), or even just to friends' lives through social media, can impact subsequent behaviors. For instance, with respect to environment-integral consequences, Lamberton et al. and Norton et al. considered learning from strangers in digital 7 environments. They find that consumers in competitive online settings infer interpersonal dissimilarity and act aggressively against ambiguous others (strangers) and find that seeing online that others made the same choices as oneself can reduce, not increase, confidence in one's choices if others' justifications (e.g., in online reviews) are dissimilar Adopting a different perspective, Wilcox and Stephen examined an environment-incidental response with respect to how using Facebook affected self-control. They found that when exposed to closer friends on Facebook, consumers subsequently exhibited lower self-control in choices related to, for example, healthy behaviors (e.g., choosing a cookie instead of a healthier granola bar.

Evolving consumer behavior in Digital Consumer behavior in mobile settings is also increasingly important, as consumers use mobile devices more frequently. This is particularly interesting in shopping contexts. In an instore shopping setting, Hui et al. studied how consumers respond to mobile coupons in 8 physical stores, finding in a field experiment that mobile offers requiring consumers to deviate from their planned shopping paths can increase unplanned spending. In an online shopping setting, Brasel and Gips focused on shopping on mobile devices (e.g., tablets) and specifically on how touching products (instead of clicking with a mouse) can increase feelings of psychological ownership and endowment. This is an interesting contribution because work on how consumers physically interface with mobile devices and how that influences decision making is scant but, as this article showed, important. Unrelated to shopping is work by Bart et al. that considered how mobile display ads—which are very small and carry very little information—influence consumers' brand attitudes and purchase intentions. They found that in many product categories mobile display ads have no effect, but that they do lift attitudes and intentions for high-involvement, utilitarian products.

Viral Marketing? Viral marketing is a mix of marketing techniques that use pre-existing social networks to increases brand awareness or to achieve other marketing objectives of 50 a business. Viral marketing helps to increase product sales with help of various processes and modules that resemble viruses. Video clips, interactive Flash games, averages, eBooks, brand able software, images, or even text messages are some of the forms of viral marketing services to add to the promotion of a website/business. Sometimes, WOM [word-of-mouth] communication and network effects of the Internet also work as a tool of viral marketing. Viral Marketing is any marketing technique that encourages web site, Internet, email or wireless users to pass 8 on a message to other sites or users, creating a potentially exponential growth in the message's visibility and effect. Viral Marketing is extremely attractive to businesses because it can deliver astounding results in a relatively short period of time. Advertising and marketing budgets no longer stretch as far as they used to, and the perceived savings by using viral web promotion techniques are too attractive to ignore. A well known example of successful viral email marketing is Hotmail, a company, now owned by Microsoft that promotes its email service and its own advertisers' messages at the end of every Hotmail user's e-mail notes. longer stretch as far as they used to, and the perceived savings by using viral web promotion techniques are too attractive to ignore. Viral Marketing methods include email marketing.

Digital is Changing Consumer Behavior: - The digital era has and will continue to change social trends, which in turn directly affects consumer behavior and demands. The change in consumer behavior can be hard to understand or even recognize, but brands today need to realize that it is happening and they need to change and adapt their customer service accordingly. The digital consumer has the potential to unsettle current competition as well as new players in any industry. Changing consumer behaviors can be daunting for brands and can present certain challenges such as an increase in negative publicity. This said, there are also certain constructive opportunities that come with the risks, like the chance to engage with customers who are looking at the overall brand value of the product or service as opposed to just the price tag.

CUSTOMER TOLERANCE:- It's now so much easier for customers to complain about bad service, meaning it's much harder for brands to satisfy customers' wants and needs. Customers place a large emphasis on the ease of service, and if this isn't met they will take to digital media to complain and let others know of their misfortunes. Brands need to accept the fact that customers are less tolerant than they used to be, and they need to act accordingly in order to retain their customer base.

CUSTOMER DIALOGUE:- Between social media and customer forums, consumers have the ability to both build and destroy brands. Word of mouth was, and still is, king. Customers have always been led by the opinions of friends and family, but nowadays this is corroborated by social media likes and testimonials. Brand reputations can stand or fall over night, all based on the communication between consumers.

MULTI CHANNEL COMMUNICATIONS:- Brands don't decide which communication methods are best used by consumers. They themselves decide this, based on which channels are used by their friends, family, and influencers alike. Brands need to choose channels based on whether it'll be suitable for the type of interaction they're looking for, otherwise the exposure of the interaction to the consumer won't be profitable. A direct and focused approach to customer service is imperative for brands to meet the heightened expectations of service, and to accommodate changing consumer behavior. This approach will give brands the opportunity to mine insight and intelligence to progressively improve their relationships with consumers.

CONCLUSION

The study concludes that consumers rely upon more than one medium in order to enhance their brand related knowledge. It means that they use the combination of various sources for making final purchase decision. Along with the traditional sources, they heavily rely on modern marketing tool i.e. online advertising. Consumers do require detailed information about the brand so as to evaluate its strengths & weaknesses; this ample amount of information then saves their time by allowing them to make the purchase decision quickly. The study also reveals that main reason for growing importance of online marketing is the increasing literacy about internet among people. They have identified that internet is truly advantageous through which they can serve their various purposes mainly social networking, online shopping & media sharing (photo, music, video). This efficacy of internet has intensified their tendency of being online. Today's consumers strongly feel that every company must use this efficacy to strengthen its marketing efforts. So that they will get motivated to use online 159 marketing with the intent of getting access to exclusive content about the brand and getting discount and sharing their feedback about brand with the advertiser . With the advent of internet technology, consumers' preference towards traditional marketing tools has decreased. Most popular traditional marketing tools are television & print media. The major benefits of online marketing are its capability of interaction between consumers and advertisers followed by availability of wide range of information & ease of shopping. These benefits make online marketing superior than traditional marketing. But at the same time consumers are susceptible about the user-safety side of internet. They feel that online marketing is unsafe as it may lead to increase in frauds & privacy issue. 10

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Study of the Recent trends in Information Technology and its resultant effects on employee behavior and the work culture

Mrs.Deepa Sujith
Assistant Professor, Christ College, Pune
Mrs. Leena Sanu
Assistant Professor, Christ College,Pune

Abstract

The advent of technology has greatly impacted our lives in more ways that we can imagine. It has revolutionized the world we live in today, bringing sophistication and efficiency in doing mundane tasks. The field of Technology is greatly evolving and introducing new trends such as IOT, Augmented Reality, Virtual Reality, Machine Learning, Automation, Everthing On Demand. Cloud, mobile and big data which have changed the very texture of traditional IT services and programming development. These trends have tremendously impacted business processes, work culture, employee behavior and productivity in the corporate sector.

This paper specifically aims to analyze the recent trends in Information technology and its resultant effects on employee behavior and the work culture.

Keywords: employee behavior, work culture, Information technology, employee experience

Introduction

The 21st century has been defined by application of and advancement in Information technology. Information technology has become an integral part of our daily life. According to Information Technology Association of America, Information technology is defined as "the study, design, development, application, implementation, support or management of computer based information systems."

Information technology has served as a big change agent in different aspects of business and society. Advances in Information

Technology offer unprecedented opportunities as well as new challenges in the working of every organization.

(Susan M. Heathfield,2016) Culture is the work environment that you supply for employees. Employees are motivated and most satisfied when their needs and values are consistent with those manifested in your workplace culture. According to Needle (2004), organizational culture represents the collective values, beliefs and principles of organizational members and is a product of such factors as history, product, market, technology, strategy, type of employees, management style, and national culture; culture includes the organization's vision, values, norms, systems, symbols, language, assumptions, environment, location, beliefs, and habits.

Objectives of the study:

- To study the various recent trends in Information Technology
- To study the impact of the changes in Information technology on employee behavior
- To study the effects of changing employee behavior in the work culture

Methodology: The research Paper is based on the secondary data published time to time through reference books, journals, book reviews, newspapers and various websites and government schemes declared time to time. The information has been analysed and presented systematically to draw certain conclusions on the basis of the study.

Recent trends in IT

The key factor as we move into 2018 is going to be IT sustainability i.e the process of ensuring information technology development that meet the requirements of the current market but also safeguard the development potential of future markets.

1. Artificial Intelligence and Advanced Machine Learning: Applied AI and machine learning are composed of many technologies and techniques(such as deep learning,neural networks and neural networks and natural language processing. These technologies, which are different from traditional algorithms and programs ,make the machines intelligent.

2. Intelligent Apps: Intelligent apps such as VPAs perform some of the functions of a human assistant making everyday tasks easier (by prioritizing emails, for example), and its users more effective (by highlighting the most important content and interactions). Other intelligent apps such as virtual customer assistants (VCAs) are more specialized for tasks in areas such as sales and customer service. As such, these intelligent apps have the potential to transform the nature of work and structure of the workplace.

3. Virtual Reality and Augmented Reality: Virtual Reality and Augmented Reality will improve in hardware and the ways we interact with the virtual environments. Among the trends affecting startup business there will definitely be AR and VR phenomena. VR will probably be used by business startups who have remote workers and have a need in them to be a "part of" the office environment. Thus, employees will be virtually in-house.

4. Digital Technology Platforms: They act as a basic building block for a digital business. They include Information Sytem Platform, Customer system platform and Analytics and Intelligence platform

5. Automation of Business processes: With advanced technology enabling the automation of previously human-exclusive tasks. Impact on employee behavior:

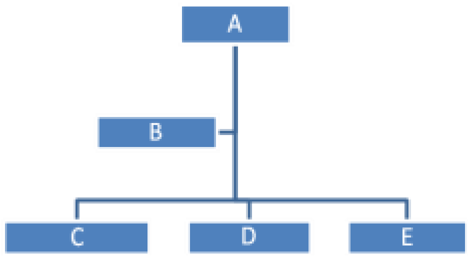
- Fear of losing jobs with Automation replacing business processes
- Employee wonder whether they have the skills to stay ahead.Full time workers are either actively looking for a job or open to new opportunities and most employees are unable to fill their job vacancies because of skill gap and high attrition rate.
- Employees were skeptical when it comes to the outcomes of organizational changes: Only four in 10 employees had confidence that changes would have the desired effects and almost three in 10 doubted that changes would work as intended and achieve their goals.
- Professionals today desire instant feedback, a behavior they've adopted from the instant gratification they receive on social networks like Twitter and Facebook.
- The technology that employees are experiencing outside of work will naturally influence them to desire the same tech at the office

1) Changes in the work culture

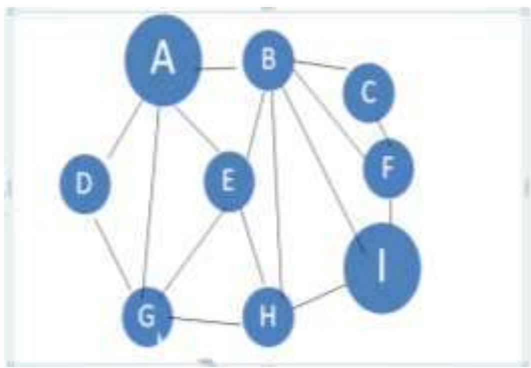
- The recent trends have all impacted how companies recruit, retain, train and structure their workforce for the future.
- No defined work place hierarchy and one can reach out to the top level management quickly with improved technology.
- Annual performance reviews are replaced with continuous reviews and regular feedback
- Workplace wellness, and well-being, become critical employee benefits for attracting top talent.
- Companies realize that workplace stress is the biggest health issue that employees face so they invest in creating a more relaxing and healthier environment for them.
- Office attire and workplace culture becomes more casual.
- Employees wear less formal clothing than they did five years ago and nearly one-third would prefer to be at a company with a business casual dress code.
- Companies have identified the trend of blended workforce as they see freelance workers teaming up with employees to work on projects together.
- Companies use people analytics to predict retention risk for employees in key job roles, and notifies managers so they can prevent them from quitting.
- Greater emphasis is given to employee experience because of which companies are being forced to focus more on corporate culture and values than pay in order to retain employees.
- Flexibility in work timings have been adopted in many organization in order to have a healthy work-life balance for a better employee experience which can direcly impact attrition rates.
- Teams spreading across the continents, work place are lot more culturally diverse which can direcly impact the work culture of the organisation
- Working Remotely:Implementation of Information Technology enables the employees to remotely access the company's network and get the work done even if they are not physically present.This systems has gained popularity and has brought in better satisfaction of the employees.

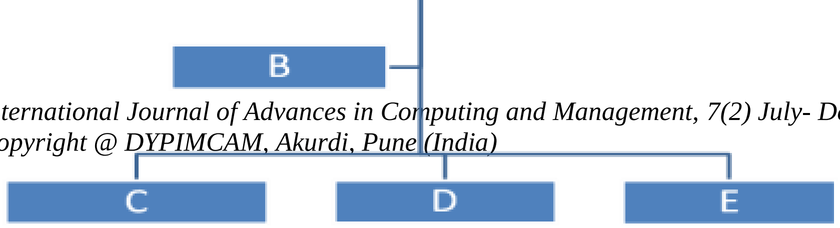
Finding of the study

Earlier work culture scenario



Present work culture scenario





With the changes in Information technology there has been a tremendous change in the work culture in order to give greater emphasis on employee experience which in turn results in improved productivity of the organized. In this study we have analysed the impact of changes in Information Technology resulting into various changes in the practises of the work culture. Some of them are listed as follows:

Old Practices	**New Practices**
Hierarchy in structure	No hierarchical structure
Fixed timings	Flexi timings
Formal dress code	Casual dress code
Annual review	Frequent feedbacks
Informal communication	Informal communication channel
Full time employees	Blended workforce

Conclusion:

Employee experience plays a major role in the success of every organization. With the technological advancements employees are provided with better work culture and environment where they are experiencing quicker productive solutions rather than a stressful and troubleshooting experiences to have better outcomes .In that case employees with tend to stick to the same environment which reduces the attrition rate in the organization thereby increasing the number of experienced employees in the organization who will always have the morale to contribute towards the success of the organization and bring more productivity.

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International Journal of Advances in Computing and Management, 7(2) July- Dec 2018,
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The need of special and focused search engine: dermatology problem

Asst.Prof. Shaikh Tehniyat
Allana Institute of Management Sciences, Pune

Abstract:
The purpose of this study is to understand the need of semantic ontology search engine for dermatology problems.as Ontologies are one of the most important parts of the semantic web technologies. Ontology is developed through healthcare website, blogs and conducting survey for dermatologist. This provides a better user experience and returns accurate, reliable search results in an acceptable response time.

Introduction:
The Internet has become one of the most important means to obtain health and medical information. It is often the first step in checking for basic information about a disease and its treatment [1].Skin disease has been shown to affect quality of life as much as other significant chronic diseases.in 2013 the term “acne” was more searched for on Google than even the term diabetes. [4].Skin disease patients are actively seeking out information online. However there is no regulation over the quality or accuracy of what they are regarding. [4]There are many search engines available today. Most of the search engines search for keywords to answer the queries these search engines usually search web pages for the required information. However they filter the pages from searching unnecessary pages by using advanced algorithms. [2].

Origin of research problem:
The large volume of health information resources available on the internet, but it is difficult to discern which resources are accurate or appropriate for users [7].Some blogs can be more harmful than helpful. [4]The quality of medical information is particularly important because misinformation could be a matter of life or death.There are So many search engines available on the Internet, such as Google, Yahoo, Bing, AltaVista, MSN Search and Ice rocket. These search engines provide different features and efficiencies.
Retrieving meaningful information is difficult. We cannot use all of them at the same time, and it creates the confusion in mind of users, which one is the best? Which one should I use [5].Patients and their family members are increasingly using the internet as a major source of advice regarding their illnesses, treatment options, dietary advice and disease prevention. However, little is known about the accuracy of medical advice obtained via the internet [6]. The keyword-based discovery mechanism is insufficient due to the retrieval of a large amount of irrelevant information.
However to overcome this problem in search engines to retrieve meaningful information intelligently, semantic web technologies are playing a major role.[2] information of a certain type, or on a certain topic, a domain-specific search engine can be a powerful tool [1].Semantic web is being developed to overcome the limitations of the current search engines like lacks of a proper structure for representation of information, ambiguity of information, automatic information transfer is lacking, incapability of machines to understand the provided information due to lack of a universal format etc. The efficiency of semantic web improved by incorporating ontology the Web services. [13]. semantic search engines are developed using ontology of the particular domain.Ontologies can provide a basis for the searching of context-based medical research information so that it can be integrated and used as a foundation for future research. [14].
Ontology may take a variety of forms, but necessarily it will include a vocabulary of terms, and some specification of their meaning. This includes definitions and an indication of how concepts are inter-related which collectively impose a structure on the domain and constrain the possible interpretations of terms. [3].
Information technology has dramatically advanced health care and health related research over the past half-century [9.]Doctor-focused social networking sites offer connection, crowd-sourcing, and reliability of the data [8]. Doctors, medical societies, and associations could critically appraise internet information and label services to rate the value and trustworthiness of information by putting electronic evaluative and descriptive tags on it. [10]. But this is very difficult to keep an eye on each website by the medical expert. As social networking has evolved, medically focused professional communities have been established.These networks are often private and protected from nonmembers.[11].

Literature Review:
The term “semantic web” was coined by timberners-lee more than 10 years ago swoogle was the first search engine for the semantic web.The semantic web initiative has resulted in a common framework that allows knowledge to be shared and reused across applications. swoogle is used by means of querying with keywords. [7].gene ontology (go), tambis, and linkbase. These allow a standard vocabulary to exist over disparate ribosomal, disease, gene product, nucleic acid, and

protein resources. fma is a reference ontology which contains over 75,000 distinct anatomic types which cover the human anatomy from sub-cellular components to major body parts and the whole organism itself.[15] radlex is created by the radiological society of north america (rsna). the goal of radlex development was to unify the variety of terminologies that radiologists use into one unified lexicon to serve all their needs.[15]. snomed-ct covers most of the areas that are used in medical practice such as clinical findings, symptoms, diagnoses, procedures, body structures, organisms and other etiologies, substances, pharmaceuticals, devices and specimen. web services like medcircle and medcertain are semantic projects with the aim to guide users to health information on the internet and to filter quality health information available on the net.[16]

Apollo is a user-friendly knowledge modeling application. The modeling is based around the basic primitives, such as classes, instances, functions, relations etc. Internal model is built as a frame system according to the internal model of the okbc protocol. [17].
Swoop is a Web-based OWL ontology editor and browser [4]. SWOOP contains OWL validation and offers various OWL presentation syntax views. It has reasoning support and provides a multiple ontology environment.[17]

Data collection

Twenty healthcare website have been considered for this study. All the websites were searched using the key words as "skin problem and prevention" ,"blogs for skin" ,"skin disorder", "skin problem during winter season" and "home remedy for skin care".
All the websites were subjected to Similar web a web analytical tool. In the current study following major attributes have been considered, for the purpose of web-analytics.
1. Global Rank. 2. Category. 3. Total Visits. 4. Average Visit Duration. 5 Bounce Rate
A brief description of each of the attributes and their relevance to the study is given below.
Global Rank: calculating the reach and number of page views for all the sites on the Web on a daily basis for certain period decide the rank of website.Lower rank indicates better usability and conversion rate.

Data Cleaning

In order to convert web data into a manageable format, data cleaning, was done.

Sr.No	Metric Name
1	Global Rank
2	Country Rank
3	Category name
4	Category Rank
5	Total Visits
6	Avg. Visit Duration
7	Pages per Visit
8	Bounce Rate
9	Country wise traffic
10	Traffic through different social networking sites

Results of Data Mining:

Domain, technology, category wise classification, cross tables and frequency table for different key metrics has generated. Rank wise, Popularity wise, Traffic source and worth wise bar and pie charts has obtained.

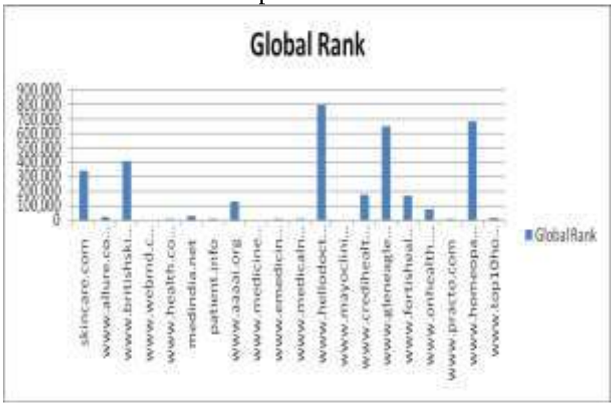

Chart 1Websites and their global rank

Bounce Rate: Bounce rate reflects the percentage of visitors returning back only after visiting one page of your website. Bounce rate is more than 50%

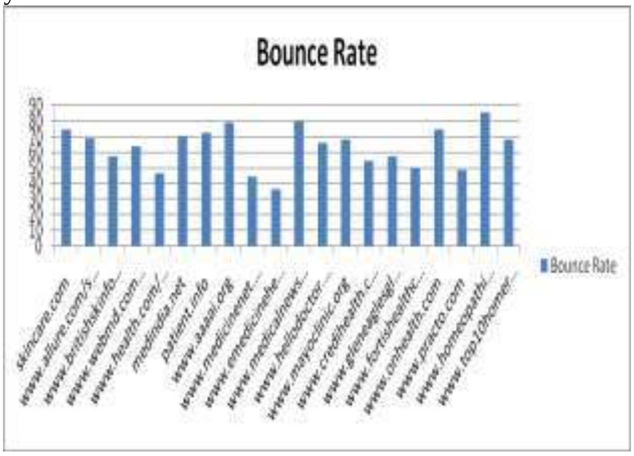

Chart 2 Websites and their bounce rate

Avg. Visit Duration: The average time a visitor spends accessing your site in a time. Higher the visit time lower is the bounce rate.

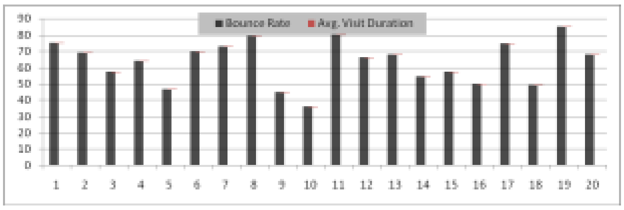

Chart 3 Bounce Rate vs Average visit duration

Conclusions

In this paper, I did a brief survey for skin related websites. Most of the websites are for healthcare which also provides skin care related information. There is very limited websites which are primarily design for dermatology.

People are suffering from different skin diseases and they rely on internet for correct information and help. As they don't search with the correct keyword they lost it. So there is a need to develop ontology based semantic web search engine for dermatology problem.

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International Journal of Advances in Computing and Management, 7(2) July- Dec 2018,
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Restructuring Transport Network in Urban Context: A case of Pune

[1]Prof. Abhijit S. Marawar,
Assistant Professor, Dr.D.Y.Patil College of Architecture, Akurdi, Pune
asmarawar@gmail.com
[2]Prof. Nikhil Mehare,
Assistant Professor, Dr.D.Y.Patil College of Architecture, Akurdi, Pune
nikhil0mehare@gmail.com
[3]Prof. Mihir N. Vakharia
Assistant Professor, Dr.D.Y.Patil College of Architecture, Akurdi, Pune
mihir.va@gmail.com

Abstract - The cities and towns of India have emerged as a prominent economic growth center in fast changing scenario of growth pattern of developing countries. This growth has led to multidirectional sprawl of the cities and development of satellite towns on the outskirts of existing city boundaries. To facilitate such rapid development; infrastructural facilities including seamless transportation systems are the need of the hour.Because of the cheaper cost of journey, a large number of people in Pune are using the state owned transport service as a primary mode; but these services have very poor service delivery, very less level of inter-modal integration with other transport services. In order to establish 'Efficient – Effective – Economical' transportation system; in this research paper authors have made an attempt to develop a methodology which can be adopted by various Indian cities to restructure their regional transport network in the context of urban area through interventions like network restructuring based on commuter demand and growth pattern, integration with other modes of public transport, Route rationalization based on duplication services.

Keywords:modal integration, urban transport, network restructuring, travel behavior, fringe development

1. BACKGROUND

Growth pattern of developing cities are changing very fast. Indian cities are amongst the fastest growing cities of the World. Towns and cities of India have become very prominent in category of developing world and emerging as important economic growth centers of India and world. To facilitate such rapid development the city needs to get upgraded in terms of providing infrastructural facilities. Cities are spreading spatially beyond the earlier periphery of the city due to rapid economic development of the city. This has led to emergence of satellite economic centers on the outskirts of the city and everybody does not travel to city center for their daily business.

Bus transportation being a wide subject, number of aspects is required to be considered to increase the efficiency of regional bus transportation. One efficient way can be to have a well-designed integrated multimodal transit network [1]. In contrast to multimodal networks, modes on intermodal networks are connected through facilities which allow commuters to transfer from one mode to another during a trip from origin to destination, Intermodal Network aim to provide efficient, seamless transport of people from one place to another [4].

2. NEED FOR STUDY

Maharashtra has city Buses, Shuttle cars, Taxies, Auto-rickshaws etc. as mass transportation modes. On one hand a large number of regional commuters use state transport buses as primary mode; due to cheaper cost of journey having various fair schemes available on daily transport, on the other hand according to the survey results, State Transport has very poor services delivery very less level of modal integration with other services of transport. Present scenario has a problem of providing adequate and efficient regional transport service. Pune Urban dwellers have variety of mass transportation modes available out of which some have developed with world class facilities and infrastructure. The reason why some of urban transport services and MSRTC projects poor image in its reliability and service delivery, is due to unreliable schedules, poor riding conditions, undulating arrival times, prolonged waiting times at stations and insufficient shelters. Service operators have their own arguments towards this malfunction. To meet the needs of people, the bus transportation should be made effective, efficient, and economical by dealing within certain area i.e.reliable, efficient and economical transportation system that can be developed such as network restructuring based on commuter demand and growth pattern, integration with other modes of public transport such as using BRTS and proposed METRO as a feeder service to PMC& PMPL, Route rationalization based on duplication services.

3. RESEARCH AIM & OBJECTIVE

This research study aims at developing a methodology which can be adopted by various Indian cities to restructure their regional transport network in context of urban area. This research includes followingobjectives*:*

1. To analyze existing movement patterns of PMC & PMPML within Pune& Pimpri Chinchwad city.
2. To restructure PMC & PMPML routes in Pune

3. To analyze possibilities for integrating PMC & PMPML with existing & proposed mass transit option

The study intends to focus on two areas of research, one will to analyze existing operations and network structure of PMC & PMPML and rationalize them; second will be to find possibilities of using other modes of urban transport as feeder service to PMC & PMPML and developing PMC & PMPML terminals on the fringe of the Pune urban area.

4. RESEARCH METHODOLOGY

The study mainly consist of 4 components, i.e. to identify and evaluate existing situation and level of infrastructure of PMC & PMPML system, Role and characteristics of other urban transport modes, review of successful cases of transport integration and route restructuring around the world, carry out field surveys to estimate the demand and get the travel generation pattern in the city, to develop different scenarios to restructure the existing network and find possibilities whether successful integration is possible for existing network.

The intension is to come up with different scenarios such as merging or omitting some of the existing routes with urban transport service or completely decentralizes Swargate Bus Terminaland scattering into multiple stations and develops them on fringe. At the end of study a methodology will be developed for restructuring regional transport system or rationalizing its current network.

STAGE 1: BACKGROUND STUDY

- Identify barriers in existing setup
- Develop scenarios to restructure existing PMC & PMPL and evaluate them
- Recommend methodology to restructure network for PMC & PMPL case

STAGE 2: DATA COLLECTION

- Identify and analyzeexisting PMC & PMPL Operating system
- Analyzing their current capacity utilization and infrastructure capacity
- Identify Depots and Pick-up stands for field survey and carry out survey
- Identify level of integration between regional and urban transport
- Measuring/Checking hypothesis

STAGE 3: PROPOSAL

- Review of successful cases around the world
- Analyzeexisting PMC & PMPL Operating

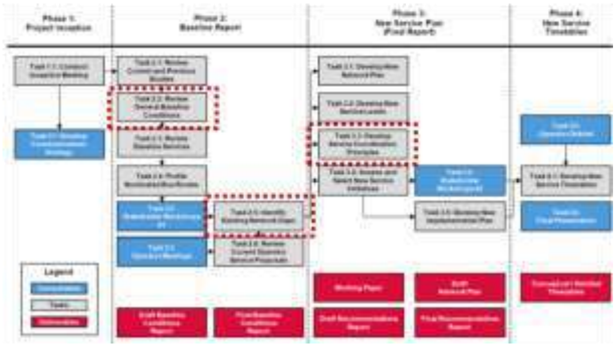
4.1 Literature Review

To better understand the multi-modal transport integration, successful cases around the World are reviewed by the Author. A case of *'Citywide Bus Network Restructuring Using an Inclusive Planning Approach- A case of Canberra'*[11] is explained here to highlight the process.

The research was purely carried out to develop a model or methodology for planning for Transportation network using multi-criteria analysis. A Canberra city was selected as a case study to check the theoretical results.

4.2 System operation before improved network design

- More than 2/3 of Canberra residents live in area with buses as their basic mode of transport
- Average bus headways were 40 minutes in the peak, 50 minutes in the off peak
- On average the last weekday bus service finished at 6:53 pm
- Less than 20% of all bus routes operated on Sundays



2

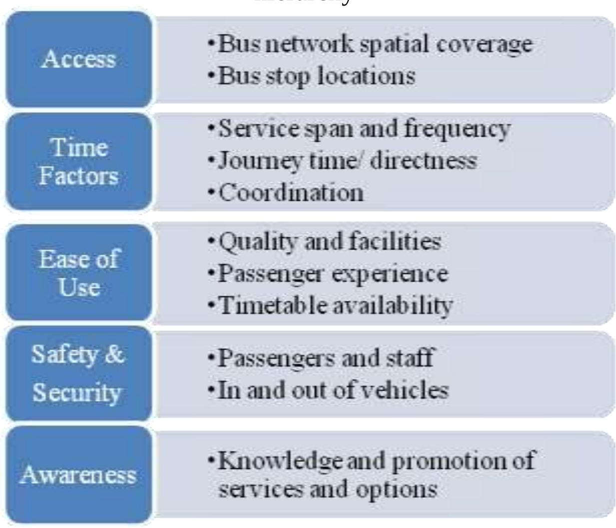
Figure 1: Methodology and list of activities carried out
Source: Citywide Bus Network Restructuring Using an Inclusive Planning Approach (2009)

Analysis Techniques:

- Consultation Process
  - Strengths of the existing service;
  - Existing problems issues; and
  - Opportunities for improvement.
- Service Assessment

Figure 2: Service Assessment Criteria

Bus network service quality review hierarchy



Source: Citywide Bus Network Restructuring Using an Inclusive Planning Approach (2009)

- GIS and Graphical Techniques
  - o Access & Time factor analysis
  - o Review of service standards
  - o Spatial coverage and temporal service plan

4.3 Recommendations

- Study Aimed at identifying approaches and opportunities
- Methodology developed was adopted & implemented across 20 bus networks of Australia.
- Review process included factors such asAccess, Time, Ease of Use, Safety and Awareness
- GIS techniques used to illustrate technical data with simple understanding.
- Individual routes and services were analyzed without any adoption of complex transit network models.
- Results produced helps in saving time and cost incurred during travel

The literatures reviewed suggestvarious aspect regarding Multimodal Transit, Integrated Multimodal Transit, and importance of Transfer in increasing the ridership. In a way, these studies clearly define the methodology and approach for analyzing integrated multimodal trip. It also clearly defines the set of indicators to study Multimodal trip. Other than Trip duration, Trip Length and cost incurred, no of transfer occurred in the total trip span, Mode chain combination for multimodal trips originating from home and mode wise stage distance and multimodal trip occurrence- all these aspects of a multimodal trip. Periodically, much attention has been paid to the level of services indicators, defined as in vehicle travel time (IVTT), Out- of vehicle travel time (OVTT), and fare or price of a trip[5][6]. Ideally In vehicle travel time should always be greater than Out Vehicle time.

In an integrated multimodal system, neither trunk-feeder services nor direct services are inherently a correct or incorrect design option [9]. Either of these options can be effective in the right circumstances. The following are the factors that can help to determine the optimum choice. The ideal solution should match the local distribution of origins and distributions and the local demographic characteristics.

Transfers play significant role in daily transit operations in daily transit operations in terms of ridership, cost-effectiveness and customer satisfaction [3]. In an integrated multimodal trip the importance of Transfer is the most critical service indicator which governs the efficacy and usage of whole system [8].

In a multimodal trip the transfer time, the total trip time, number of Transfer and comfort of Transfer and financial cost of transfer will govern the transfer penalty occurred in the trip [2]. Various factor like operational factors, Physical factors and passenger attributes are identified which affect the transfer penalty [7]. Methods to calculate the transfer penalty and total generalizedcost of the trip were identified. This was used to understand and identify the time value of money for different income level of users. Valuation of transfer penalty can be done for users of different income level

to understand the cost of threshold of transfer in their trip pattern and its command on mode choice decision.

Data Collection Approach

Description on research techniques, criteria and methods used to select the samples, methods of data collection and analysis is mentioned in this section. For this study a field work was carried out for 4 days in the month of March'13. Various secondary data sources from PMC & PMPML are collected during analysis process. Primary survey was conducted in the selected PMC & PMPML Depots and pickup stands to identify the present threshold of travel demand pattern by the users. Second primary survey was done in the influence zone of the selected station to identify capacity utilization and infrastructure survey. This part of the document also focused about the methods adopted for analyzing the data.

The survey produced the strategic network planning attributes for all the five station. The data analyzed helped to understand correlation between different trip factors. From revealed preference survey, the commuter zone of each station will be identified. The results will also help us to assess the modal integration scenario in the five specific stations in the context of integrated multimodal public transit facilities of urban and regional transport services. The stated preference survey done in the influence zone helped to identify how transfer coordination plays a role in other public transit system in context of Pune and by converting the same trip into metro obligatory trip we need to find out how the same trip factors act. The survey results helped us to identify if the integrated public transit facilities can reduce the burden of transferring between modes to access and egress from metro and substantially increase the transit systems efficacy and use.

Table 1: Data Collection Methodology to identify Potential routes and terminals to restructure GSTRC network

Research Question	Data Required	Methods
PMC & PMPML Network Characteristics	• Previous years statistics • Frequency&Headway • Actual Capacity • Utilized Capacity	• Trend Analysis from available data • Visual Perception
PMC & PMPML Route Restructuring	• Network map of existing routes • Location of Interchange and terminals • Operational data of other private operators • Passenger origin-destination zones (commuter pattern)	• Identify new potential terminals and routes for strategic network • Integration possibilities with private operators • Generate scenarios and choose best suitable strategic planning • Check scenarios for feasibility • Passenger survey for mode wise commuter pattern • Origin-destination survey • Bus and passenger frequency on existing routes • Private operators survey (Location and operational characteristics) • Zone wise commuter generation • Intra-zonal desire-line diagram
Integration possibilities with other transport services	• Private operators terminal location and fleet management information	• Building scenarios where all PMC & PMPML and private operators services terminate on peripheral location and a common feeder service is developed to cater these mass transport services • Othe 3 nario can be developed where existing Urban Mass Transport services can be used to cater Regional transport services. • Common infrastructure facilities can be used for both Public and Private regional transport services

Source: CDP Pune

5. V. A CASE OF PMC & PMPML OPERATIONS IN PUNE CITY

Vehicle ownership is rapidly increased with population and creates major transport problems in city. Without any command and control instruments, city is growing in direction of developed country which had experience of high private vehicle ownership and their adverse impacts. Yet, focus of authorities is still being given on the supply side of management. Though there have little steps been taken up in managing the travel demand but this sector is still not being explored. Among the different techniques of demand management, only planning and technology measures are being considered as long term measures. Remaining informative, regulatory and economic measures are not being reviewed. Though parking measures are considered but they are more towards the supply management rather than an economic tool.

Hence, this sector of managing travel demand is still not being explored fully by the city planners and managers. There is much wider scope which can manage the growing demand of travel through personalized modes and further can increase the patronage of existing and proposed transit systems.

5.2 Travel Situation inPune City

This section presents the passenger characteristics and the travel behavior of the sample population. The results are based on travel patterns of different socio-demographic groups surveyed. Data collected during the survey and fieldwork is analyzed so as to answer research question related to network restructuring for PMC & PMPML and also try to highlight the present situation of inner city movement of PMC & PMPL. Time loss and operational deficiencies as transfer Penalty for both metro users and non-users are identified. Following content summarizes the current issues with movement of PMC & PMPML vehicles in inner city area. Also explores the possibilities of integration with other modes of transport.

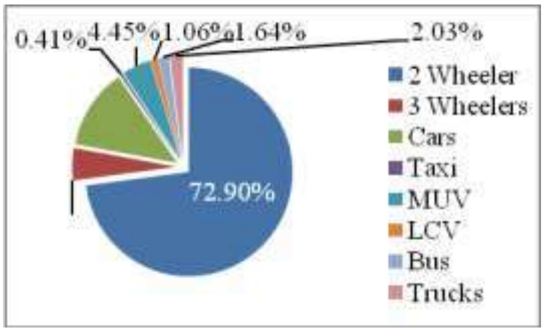
2) Vehicle Pattern

Pune city is well connected by an expressway, several national and state highways, the broad-gauge and meter-gauge railways and an international airport. The city transportation system is predominantly dependent on roadway systems. Vehicular growth has been rapid. The network is experiencing heavy congestion. Consequently air pollution has become severe.

5.1 Mode share

At the time of formation of the state of Pune, in 1961, there were only 43000 vehicles registered. This figure has risen to over 70 Lakhs vehicles by the year 2004, recording a rise by 160 folds in four decades. The mode share of Pune city is like 72 % were two wheelers, 13 % were cars, 5% were three wheelers and 2 % were bus. This high density and rapid growth of vehicles have worsened the transport situation to a significant extent.

Figure 3: Mode share



Source: CEPT-COE (UT), BRTS Detail Report, 2005

6. SURVEYFINDINGS

Different indicator have considered while analyzing travel behavior such as Access zones, Access distance, Age group using PMC & PMPML services, Trip frequency and trip purpose. Being developed as radial city Pune has almost equal share of passenger accessing from across the city to existing stations. Being a hub for PMC & PMPML buses Swargate Bus Terminal has the highest inflow of buses and passenger. Terminal is located in the heart of city and surrounded by busy CBD area. Desire line diagram carried out for survey also indicates the highest inflow in Swargate Bus Terminal station. Survey conducted at selected 5 locations represents the data of access distance stations from passenger origin place. It indicates that 42% of the people access station from within 5 km of radius of station. More people use more than two modes of transport to reach to station.

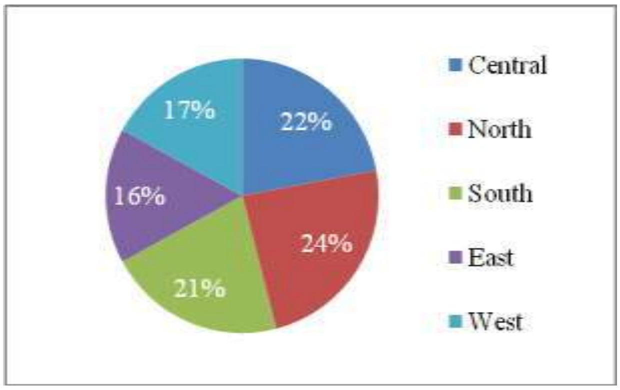
6.1 *Parallel bus routes*

PMC & PMPML stretches are covering around 48 km length of roads in Pune city with 6 different directional routes covering destination on all neighboring states of Pune. These routes are also catered by urban transport services like BRTS and proposed METRO. On an average 62% of designated PMC & PMPML routes have parallel bus network of

urban transport services. This put competition between two modes and affecting the patronage of both.

B. *Survey Analysis*

Figure 4: Passenger Access zone



Source: Survey Findings

Passenger travel behavior pattern is a necessity to develop a strategic network planning for new routes. Having radial development pattern the city of Pune has almost uniform access pattern to stations as seen from above chart. Majority of passenger access Swargate Bus Terminal station as most of the buses either originate or terminate there. Access of passenger from east and west zones are relatively less as these are developing areas and have lack of connectivity to PMC & PMPML station. Such stations need better connectivity for full capacity utilization of the station.

Below drawn map (i.e. map no 1) shows the Interpretation of above analyzed data geographically mapping intensity of passenger access to selected stations. Volume of passenger access to selected station has been described intensity wise on the map. Map shows that Swargate Bus Terminal and PMC Bus Terminal jointly cater to more than 50% of the total PMC & PMPML passenger movement across the city. Concentration of passenger inflow is seen at

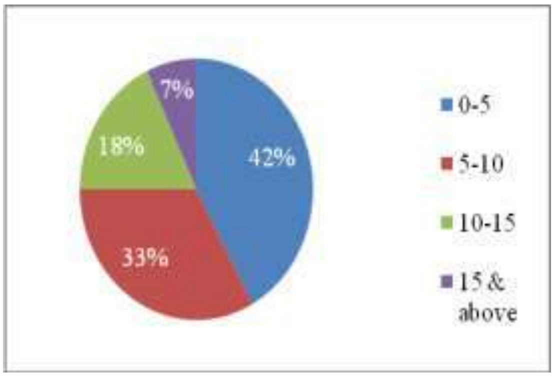
central bus terminus of Swargate Bus Terminal station. Which also requires more number of buses enter into the city to cater to these demand? It is observed that greater number of people coming from northern side of the city where major industrial units have established. Thus number of worker population or daily commuter is using PMC &PMPML as their preferred mode.

Map 1: Passenger Access intensity to selected station

Source: Self Study, Field survey

Thickness indicates number of passenger per day.

Figure 5: Access distance for Bus stations

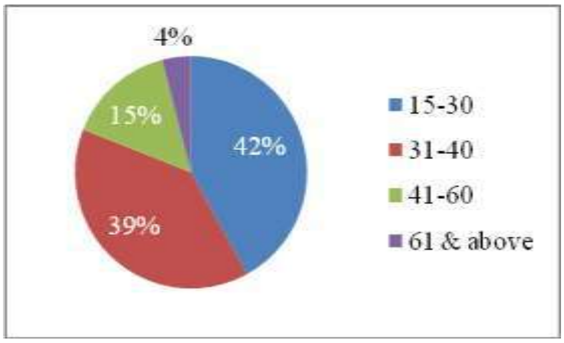


Source: Survey Findings

One of the indicators for analyzing travel behavior for passenger is Access distance to station from their origin zone. Further it is classified by mode used to travel this distance. Outcome shows that around 33% of total passenger access station within 5 to 8 Km. Further it shows that most of these passengers use more than one mode to reach to these stations. This ends up in prolonged access time and troubling passenger who are with extra luggage. If a dedicated feeder service is developed issues with access can be resolved.

Age group classification for access to stations segregates the specific economic group of people who travel trough regional transport services. Form surveys it was found out the majority of the passenger who travel through PMC &PMPML are fall under age group of 15 to 30 year who are mainly working group and commuting between the cities of Pune. They are daily commuter who uses PMC & PMPML as their preferred mode. Another larger share is of age group of 31 to 40 years who was noticed traveling with family or for some recreational or social reasons.

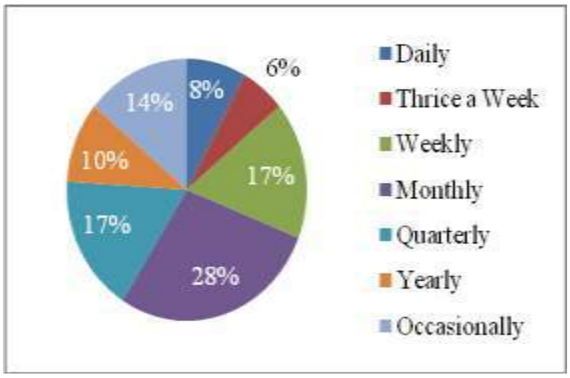
Figure 6: Age Group Classification to use PMC & PMPML Services



Source: Self Study, Field survey

The survey format includes trip frequency indicator for analyzing passenger travel pattern and usage of regional transport service. Survey results shows around 8% of service users are daily travelers who are basically daily commuter using service for reaching to their daily business or work station. Share of daily commuter is relatively very less as seen in total. Reasons might be lack of good bus facility, Availability of bus, Access to station or chain mode combination to access t station. 28% using services monthly a base which is the highest share. If good access facility to reach bus stand is developed; share of daily commuter can be increased. According to preferred choice survey monthly as well as daily commuters would welcome the concept of decentralizing the Swargate Bus Terminal central depot to peripheral locations. Major share of daily commuter prefer private mode of transport shuttles or mini-bus to for shorter distances around 140 km, these services are cheaper and faster comparatively. 10% share of daily commuter even has a greater number of passengers commuting between Gandhinagar & Pune.

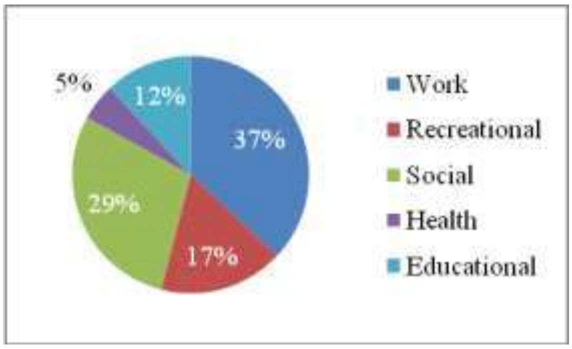
Figure 8: Trip frequency



Source: Self Study, Field survey

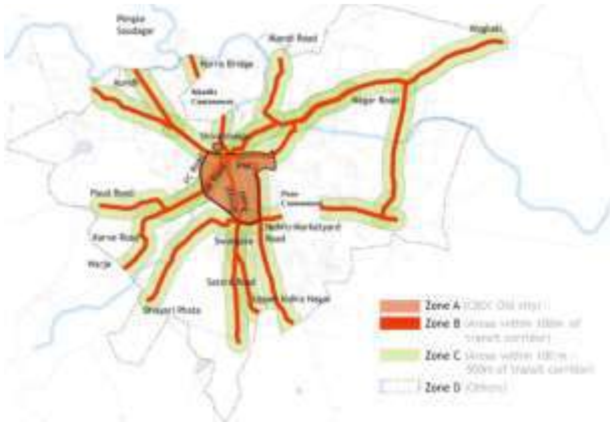
37% of the passengers have work as their purpose of travel which supports earlier finding of 10% as daily commuter who are engaged in work related activities. Work and social purposes are the predominant purpose of travel and both need better facility during travel. Over past few years tourism sector have grown considerably due to which share of recreational purpose has also increasing. All these purposes need better accessibility and good connectivity along with hassle free transfers and access to bus stations.

Figure 7: Trip Purpose



Source: Self Study, Field survey

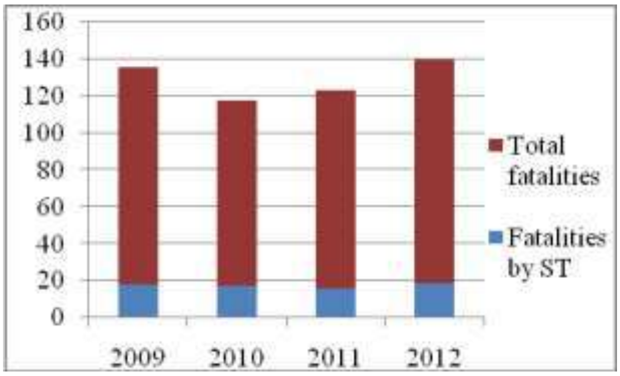
Map 2: designated PMC & PMPML corridors



Source: *Center for Excellence, COEP University, Self Analysis*

To analyze the hurdles in movement of GRSTC vehicles in inner city area, location of fatalities and serious injuries have been identified on all 6 designated PMC & PMPML routes. Fatality and serious injury wise location have been marked on map on the bases of data collected from traffic police department and analyzed them with respect to movement of PMC & PMPML movement in inner city limits. Data shown above represent the accidents occur during the year 2010-11. It is observed that 21 and 28 fatalities occur in the year of 2011 & 2010 respectively by PMC & PMPML vehicle out of 83 and 92 total fatalities on the corridors which is more 24% and 19% respectively compared to previous year. Data analyzed above seeks attention towards improving safety parameter for PMC &PMPML vehicles. Hence it is very difficult to improve safety factor in busy inner city area as road widths are limited and providing segregated lanes for such large size PMC & PMPML vehicle is impossible whereBRTS already functioning. Thus a better way is to find ways to integrate regional transport system with such existing services and form truck-feeder like service.

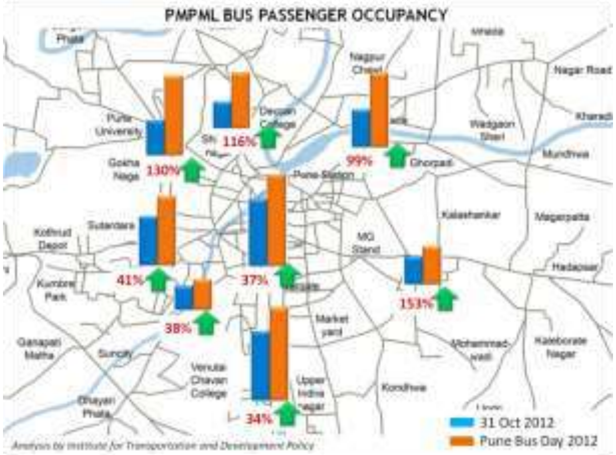
Figure 9: Number of fatalities



Source: Analysis from map 2 and data collected from COE

For better understanding of fatalities on designated PMC & PMPML routes trend analysis has been carried out which shows that the rate accidents is increasing over the years and reasons being limited availability of carriage-way and increasing number of private vehicle owner-ship and decreasing use of Public transport. Analyzing the map it is seen that peripheral areas such as Odhav, Naranpura satellite and other have shown higher number of fatalities and serious injuries during past years. It was observed that these areas have much wider corridors and higher average speed than the areas of inner city that may be sometimes could be the reason for higher rate of fatalities.

C. 6.3 Bus flow per hour



D. Map 3: Map of bus flow per hour

Source: PMC &PMPL Pune division office

To understand the capacity and demand of the designated PMC & PMPML routes, each route is assigned with the value of bus-flow per hour. Intensity of line shows the range of bus move per hour on selected route. It is observed that bus towards north Pune and towards Maharashtra has highest number of bus flow. More over these routes have also being served by AMTS and some patches by BRTS also. Thus they have potential to connect them with these urban transport services. PMC &PMPML has existing potential locations where it can terminate PMC & PMPML vehicles at ring road and passengers can use urban transport services to reach to inner city area.

E. 6.4 Destination passenger flow

Similar to analysis of bus flow per hour indicator passenger flow is also an important indicator to study route characteristic.The ratio of bus allocation on routes to the respective volume of passenger is important to analyze.Capacity utilization can be understood with this ratio and help in planning for upgrading the network or to strategically planning for proposing new routes. Highest flow of passenger is seen on the Maharashtra corridor where daily flow of around 22000 passengers was noticed. The ratio of PMC &PMPML bus to passenger is 1:42 (On an average 1 bus carrying 42 passenger per trip). Other two most crowded routes are Saurashtraand North Pune. These routes are also serviced by AMTS and other modes of public transport.

Map 4: Destination Passenger flow
Source: PMC & PMPML Pune Divisional Office

7. STRATEGIES

All the surveys and their analysis are done with an aim to achieve the vision of developing a methodology to *Restructure Regional Bus Transport Network in Urban Context*. In order to achieve this aim different scenarios have to be generated to see the future prospects of the model to covert it in tangible format. Further these scenarios have to check by various future implication and context responsiveness. The best suitable scenario is to be selected for physical implementation of model.

In case of Pune city context specific two scenarios can be generated to check the best suitable format.

Scenario 1

To develop a SPV in joint venture of PMC &PMPML and Private Operators to establish feeder service which will provide a transfer service for passenger to move from inner city area to proposed peripheral terminals.

Scenario 2

To augment existing mass transport services such as BRTS & Metro use them as feeder service to proposed peripheral terminals.

Further into it, these scenarios may be analyzed through following parameters and to conclude to best suitable option:

- Calculate number of fleets on each route
- Vehicular frequency on each route
- Possibility to use existing terminal infrastructure of PMC & PMPML or private operator
- Possibilities of integration with feeder service
- Possibilities of restructuring existing services
- Distance between new peripheral terminals and existing PMC & PMPML bus depots

7.1 Concluding principles based on scenarios

The principle put forth here are covering major aspects related to network restructuring and augmentation. Below mentioned are some principles based on the concept developed.

- Determination of Parameters to check the level of integration between existing Urban & Regional mass transport services
- Along with Private buses; PMC & PMPML busesshould also terminate on periphery of the city,
- Central bus depot can be transferred to private players who shall establish commercial activities along with establishment of feeder service,

- Current urban mass transport or dedicated feeder service can cater to both Private operator and PMC & PMPML regional traffic,
- Regional mass transport services should be allotted a designated internal city corridors which can act as trunk route

7.2 Proposed Network & Terminal Location

Different scenarios generated above provide various ways to develop an integrated network approach. The concept of terminating PMC &PMPML terminals on the periphery of the city is adopted in restructure network proposal.200 ftSardar Patel ring road provide great potential to set-up most of new PMC &PMPML terminals and proposed network covers round 62% of proposed outer route network. Other major portion covered is Sarkhej-Gandhinagar highway. Both the routes are potential in terms of traffic movements and terminal facilities. The proposed network is also having potential in terms of using existing terminal infrastructure of private operators if in case an integration mechanism is possible with them.

8. CONCLUSION

Effective transport services could be provided only when co-operation from all concerned stake holders are available, leading to full integration on all levels, via planning, funding, implementation, operation and maintenance, network and profit sharing [10]. The formation of SPV amongst PMC &PMPML and private players though a distant dream, efforts towards that direction could be attempted by all concerned organizations. Public participation in the planning process could be stepped up to involve and educate the users about the value of services, leading to effective utilization and leveling of demand and supply. It calls for a holistic approach to tackle the problem at hand.

The Research finally ensures that absence in integration between multimode produce more burden of service access to the users. Lack of coordination between respective authorities and political willingness make the inescapable loss of PMC &PMPML Authority.

8.1 Future Scope of Research

The Synchronization of several routes for feeder services can be detailed up in future research. The future research can be done in comparing and understanding of Value of access time in Total Travel time and its implication on generalized cost on trip and how it varies city wise.

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To Study Drivers of Consumer Misbehavior at Supermarkets & Malls in Pune City

Dr. Balasaheb Bhamangol
Dr Abhijeet Kaiwade
Faculty Members, D Y Patil Institute of MCA and Management, Akurdi

Abstract*— Consumer misbehavior is a problem faced by all businesses worldwide. With the emergence of malls and supermarkets in India, there is a lot of competition among these supermarkets. The lower the price and higher the discounts, there is a high probability of high sale in the supermarket. Supermarkets and malls allow prospective consumers and visitors to see, handle and try (in case of clothes) the articles with their own hands. This is a good marketing trend and method for increased sale of their products. Though there are generally more of genuine consumers, still no society can deny the presence of trespassers and fake consumers. Fake consumers are that who visit supermarkets and malls either for fun or to steal articles. There are few consumers who misbehave in some or the other ways while in the mall. It is obviously not a good practice. All of these consumers who misbehave come from different social, emotional, psychological economical and cultural backgrounds. This research paper is an attempt to understand several drivers to consumer misbehavior that affects badly on the business of the supermarkets and malls.

***Keywords*— Consumer Behavior, Consumer Misbehavior, Consumer Research, Drivers**

II. Introduction

As it is well known that there are some behaviors in society that are tolerable in a given situation. Anything outside of those time-honored behaviors is considered misbehavior. Consumer misbehavior refers to the common occurrence of consumers acting outside the societal and ethical norms to be followed by consumers in different situations. Consumer behavior research relies on self reports regarding past experiences of imaginary circumstances. However, attempts to collect quantitative or qualitative data from consumers to examine the extent to which they misbehave and their reasons for this misbehavior are stalled by current research techniques. Consumer misbehavior is defined as "*behavioral acts by consumers which violate the generally accepted norms of conduct in consumption situations". These behaviors include vandalism, retaliation, and violence*. [1]

Pune is well known hub for several Information Technology, biotechnology and automobile companies. The city gives several job opportunities to millions of local population, immigrants from not just other countries but from other states of India as well as Maharashtra!

There are several businesses started-up because of the demand of the huge population to serve them well. Supermarkets and malls are examples of businesses that have increased standard of living of the common man in Pune city alike other metro and smart cities of India. Pune has almost 28 supermarkets and malls. There are thousands of customers visit supermarkets and malls everyday leading to a turnover of millions of rupees per month.

The consumers show different behaviors in different situations. There are several drivers of consumer misbehavior. It means there are several reasons that facilitate the act of misbehavior by consumers in some or the other way. Let's find-out the same through this research paper.

III. Review of Literature

Consumer behavior is the "*study of the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas, or experiences to satisfy needs and desires*" [29]. Traditionally, the study of consumer behavior has assumed that consumers behave in a rational and compliant manner when they purchase, use, and dispose of products and services [30]. However, recent research suggests that consumption situations are often marred by consumer misbehavior [16, 23].

Consumer misbehavior is defined as "*behavioral acts by consumers which violate the generally accepted norms of conduct in consumption situations*" [13]. These behaviors include vandalism, retaliation, and violence [16]. However, these behaviors are conceptually different to other more appropriate (but negative) behaviors such as making a legitimate complaint to an organization, switching brands for a short period, or switching brands permanently. Consumer misbehavior is pervasive: Statistics

Canada report that almost a third of nurses are assaulted by their patients [7].

Other recent examples of consumer misbehavior include an enraged high-profile actor who assaulted a hotel concierge over a phone fault [9] and a disgruntled tenant who fatally wounded an Australian real- estate receptionist over a discrepancy in his bill [5].

As these examples illustrate, consumer misbehavior has adverse psychological, financial, and social costs for organizations, their employees and other consumers [13, 15]. The severity of these outcomes of consumer misbehavior highlights the necessity of understanding and managing misbehavior in order to lessen its impact.

In order to manage consumer misbehavior, it is important to understand its drivers. Recent research has moved away from a purely cognitive focus to identify emotions as key drivers of consumer misbehavior [18, 28]. An emotion is defined as "*a mental state of readiness that arises from cognitive appraisals of events or thoughts...and may result in specific actions to affirm or cope with the emotion*" [2].

For instance, people who feel angry rather than fearful are more likely to complain to a service provider than retaliate against them. Conversely, people who feel ashamed and powerless may be more likely to engage in vengeful behavior (e.g., verbal or physical abuse)

Despite acknowledging the importance of emotions, our understanding of consumer misbehavior is marred by the limitations of traditional research methods, which typically include self-report responses. The difficulty in using this approach to investigate emotion and behavior is the inability of people to accurately recall or predict their emotional state and subsequent behavior [3]. In addition, social desirability bias makes consumers reluctant to admit to misbehavior, even in an anonymous or confidential survey [18].

Aside from these self-report issues, consumer misbehavior is a sporadically-occurring (low base-rate) phenomenon, which renders observational techniques highly inefficient and impractical. Furthermore, it would also be highly unethical for researchers to fabricate a "real" situation that would prompt misbehavior from consumers. Thus, there is a need for measurement instruments that can more accurately elicit emotional responses and consumer misbehavior in a resource-efficient and ethical manner. [4]

Given these issues, a popular alternative to investigate consumer misbehavior is the use of role playing, where respondents are asked how they (or someone else) would feel or behave in certain situations [14]. Traditional research has been conducted using written role playing scenarios [27], which are often criticized for being low in involvement and thus producing questionable results [14].

IV. Research Design and Methodology

A. *Research Design:*

This is an ***exploratory research*** study any behavior is a cognitive and intangible activity that can be studied through observation and experiences only..

B. *Methodology:*

B.1 SAMPLING DESIGN

Population: 5,00,000 (Approx. Consumers of SM &M)
Sample frame & unit: Supermarkets and Malls, Consumers (including Managers of SM & M)
Sample size: 354 Consumers (including 10 Managers of SM & M)
Sampling Method: Simple Random Sampling
Data Collection Method: Structured Questionnaires
Research Type: Exploratory research
Area Covered: Pune City

B.2 OBJECTIVES

Following are the objectives:

1. To study different types of consumer misbehaviour at supermarkets and malls.

2. To learn drivers of consumer misbehaviour at supermarkets and malls.

B.3 HYPOTHESIS

Following are the hypothesis:

H_1: Fighting with Staff or Other Customers is the most frequent misbehavior seen at Supermarkets and Malls (SM & M).

H_2: A psychological problem is the most observed driver of stealing articles from Supermarkets and Malls (SM & M).

V. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

A. Data Presentation and Analysis:

A.1.2 Supermarkets and Malls (SM &M) in Pune City

Supermarkets and Malls in Pune City		
Name of SM & M	**No. of SM & M**	**% of SM & M**
Abhiruchi	1	4.00%
Big Bazaar	6	21.00%
D-Mart	7	25.00%
More	4	14.00%
Others	3	11.00%
Pheonix Market City	1	4.00%
Reliance Fresh	5	18.00%
Vishal Mega Mart	1	3.00%
Total	**28**	**100.00%**

Table A.1 Supermarkets and Malls (SM &M) in Pune City

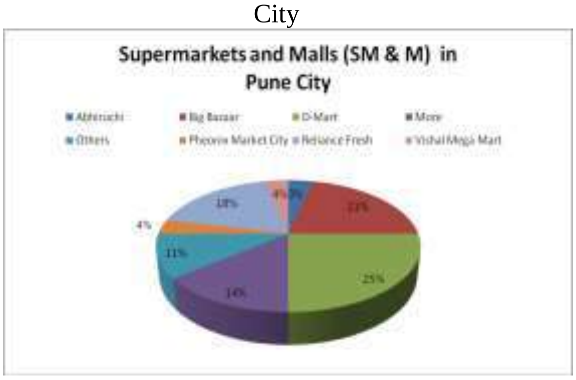

Chart A.1 Supermarkets and Malls (SM &M) in Pune City

A.1 : INTERPRETATION

From Table No. A.1 and Chart. No. A.1 it can be interpreted that there are maximum i.e. 7 (25%) outlets of D-Mart are there in Pune City.

A.2 Types of Consumer Misbehaviors Reported at SM & M

Types of Consumer Misbehaviors Reported at SM & M		
Kind of Misbehavior	**Maximum Response**	**% Response**
Damaging Using or Consuming Articles	**0.1**	**1.00%**
Fighting with Staff or Other Customers	**9.6**	**96.00%**
Stealing Articles or Not Paying Bills (Partially/Fully)	**0.2**	**2.00%**
Troubling Staff and Other Customers with Pranks or Bad Words	**0.1**	**1.00%**
Total	**10**	**100.00%**

Table A.2 Types of Consumer Misbehaviors Reported at SM & M in Pune City

Chart A.2 Types of Consumer Misbehaviors Reported at SM & M in Pune City

A.2: INTERPRETATION

From Table No. A.2 and Chart. No. A.2 it can be interpreted that out of the misbehaviour conducted and reported at the supermarkets and malls, there are 96% incidences related to consumer misbehaviour wherein the consumers misbehaved by handpicking/stealing some articles that means they tried to escape without paying the required amount of the article. It means maximum times handpicking and non-payments are done by consumers at supermarkets and malls.

A.3 Drivers of Consumer Misbehavior at SM & M in Pune City

Drivers of Consumer Misbehavior at SM & M in Pune City		
Type of Driver	**Most effective Driver**	**% of Most effective Driver**
Economic	158	45.00%
Emotional	31	9.00%
Psychological	129	36.00%
Situational	15	4.00%
Societal	21	6.00%
Total	**354**	**100.00%**

Table A.3 Drivers of Consumer Misbehavior at SM & M in Pune City

Chart A.3 Drivers of Consumer Misbehavior at SM & M in Pune City

A.3 : INTERPRETATION

From Table No. A.3 and Chart. No. A.3 it can be interpreted that out of the misbehaviours reported at the supermarkets and malls, there are 45% incidences related to consumer misbehaviour are due to economic problems i.e. absence or unavailability of money. The second most significant driver is psychological problems that counts 36% out of all types of drivers of consumer misbehaviours at SM & M in Pune City.

B. Hypothesis Testing

H_1 Fighting with Staff or Other Customers is the most frequent misbehavior seen at Supermarkets and Malls (SM & M).

The first hypothesis of the research is "**Fighting with Staff or Other Customers is the most frequent misbehavior seen at Supermarkets and Malls (SM & M).**"

H0 Null Hypothesis : 95% or more managers of SM & M have observed fighting with staff and other consumers as the most frequent misbehavior consumers show at SM & M in Pune City. (H0: p>=0.95)

H1 Alternate Hypothesis : <95% managers of SM & M have observed fighting with staff and other consumers as the most frequent misbehavior consumers show at SM & M in Pune City. (H1: p<0.95)

Respondents	Sample Size	Frequency of Fighting with staff or other customers	Standard Error	t-statistics
Managers	10	9.6	1.1755758	1.5268

TABLE B.2: HYPOTHESIS 1 TESTING

As the sample size is < 30, therefore normal approximation is satisfied. In this case, T-test and as one proportion is involved. T statistics of awareness of professional networking is 1.5268
which is <1.64, hence accept null hypothesis and reject alternate hypothesis both at 5% level of significance. Thus, it is seen that there are more than 95% i.e. managers of SM & M that shave experienced fighting with staff and other consumers consumer out of the other misbehaviors shown by them and hence the **hypothesis of the study is accepted**.

H_2: A psychological problem is the most observed driver of stealing articles from Supermarkets and Malls (SM & M).

The second hypothesis of the study is "**A psychological problem is the most observed driver of stealing articles from Supermarkets and Malls (SM & M)**".

H0 Null Hypothesis : 99% or more consumers who steal articles are psychologically unstable.
(H0: p>=0.95)

H1 Alternate Hypothesis : <99% consumers who steal articles are psychologically unstable.
(H1: p<0.99)

Respondents	**Sample Size**	**Drivers of Misbehavior**	**Standard Error**	**t-statistics**
Managers	10	45	1.1755758	1.7897

TABLE B.3: HYPOTHESIS 2 TESTING

As the sample size is <30, therefore normal approximation is satisfied. In this case, T-test and as one proportion is involved. T statistics of a psychological problem is the most observed driver of stealing articles from Supermarkets and Malls (SM & M) is 1.7897 which is >1.64, hence reject null hypothesis at 1% level of significance. Thus, it is seen that consumers who steal articles are psychologically fine and there are other drivers for misbehavior hence the **hypothesis of the study is rejected**.

VI. FINDINGS AND SUGGESTIONS

A. Findings

1. D-Mart covers the 25% of the SM&M market of Pune City.
2. The most frequent form of misbehaviour is fighting with staff and other consumers at SM & M.
3. Insufficiency of funds or money is the most observed driver of misbehaviour at SM & M.
4. Psychological problems may lead to misbehavior at SM & M.

B. Suggestions

1. Consumers must refrain from such misbehaviour as this kind of misbehaviour can lead to a habit that might destroy their future.
2. They can be well counselled to avoid repetition of misbehaviour anywhere.
3. Security at SM & M should be made more stringent to avoid any such misbehaviour.
4. Consumers must be self-regulatory to become self-earners, in case there are economical problems which is one of the drivers to misbehave in SM & M.

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International Journal of Advances in Computing and Management, 7(2) July- Dec 2018,
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Understanding Successful Academic Leadership: A Case Approach

Ms. Shalaka Parker
Research Scholar & Faculty
D.Y. Patil Institute of MCA & Management, Akurdi, Pune.

Abstract

Purpose – To analyze and understand the practices used by Academic Leaders in B-schools in Pune, to bring about successful Academic Leadership and also the conditions under the effects of which such practices are heightened or diminished.

Design/Methodology/Approach – Two B-Schools in Pune were approached: one a very reputed and branded institution ***(Institution A)*** and the other an average rated institution ***(Institution B).*** So as to protect the identities of the Academic Leaders participating in or influenced by this study, the names of the B-schools under study are kept confidential. Academic leaders of these two B-Schools were interviewed to find out:

1. What practices are used by Academic Leaders to bring qualitative change in the Institution?
2. What gives rise to successful Academic Leadership?
3. Under what conditions are the effects of such practices heightened or diminished?
4. Which variables effectively "link" the Academic Leaders' influence to student learning?

Findings – The Leader of Institution A was a transformational leader with excellent administrative skills, interpersonal skills, communication skills, a foresighted vision and mission for the institute, in-depth knowledge, avid experience and an insight into academics. Also the leader provided information showing encouraging signs of addressing progress, via implementing effective practices in the areas of successful leadership, identifying variables which link Academic Leaders' practices to student learning and analyzing and strategizing to further develop the conditions enhancing or combat the conditions diminishing successful leadership practices.

However, the Academic leader of Institution B, though an old and experienced employee of the Institution, recently posted as a Director was very complacent, with a very few leadership skills and administrative skills. Most of his plans to bring about a successful change in his institute were still on paper.

Institution A

A) Successful Leadership Practices in B-Schools under Study

Successful academic leadership practices identified in the B-Schools are described using a
Classification System developed by Leithwood and Riehl (2005). This classification system identifies nine specific practicesaimed at setting directions, developing people and redesigning the organization as "the basics" of successful leadership –probably not sufficient for success, but necessary in almost all contexts.

1) Setting directions*:* Evidence reviewed by Leithwood and Riehl (2005) suggested that successful leadership creates a compelling sense of purpose in the organizations by developing a shared vision of the future, helping build consensus about relevant short-term goals and demonstrating high expectations for colleagues' work.

In **Institution A,**direction-setting was closely linked to demands for greater accountability, namely; Goal alignment which ensured that both people from top to bottom in an institute and all its departments are working to achieve similar goals, Empowerment of faculty members which provided them with an opportunity to develop and hone critical thinking skills so that they can have the tools needed to resolve problems and conflicts.Students' learning and infusing of employability skills was central to the direction – setting activities of the institute.

To empower faculty, the academic leader considered how he is able to energize the team and inspire individuals.

2) **Developing people:** Leithwood and Riehl (2005) include, among the practices in this category, providing support for individual colleagues' ideas and initiatives, providing intellectual stimulation (e.g. reflect on existing practices, question taken-for-granted assumptions and consider new practices) and modeling important values and practices ("walk the talk").

The Director of **Institution A** was instrumental in developing second line of leadership from the faculty members in his institution by building a team culture, using problem solving techniques, implementing interpersonal skills development activities, activities leading to the development of critical thinking in the faculty members and elevating their intellectual capacities through trainings, faculty exchange programmes, job rotations, provision of sabbaticals etc.Deputing faculty to foreign institutions as experts and inviting foreign faculty to the Indian campus prevents faculty members from growing intellectually stale and also creates in them vibrancy and dynamism. In some respect, faculty-staff exchange programs are like sabbaticals for the personnel involved and, as with sabbaticals, benefits accrue to both the individual and the institution. The Director had taken conscious efforts to support faculty members, staff and students in times of crisis, had acknowledged good work, and engaged faculty members in critical reflection. He is also visible and accessible to faculty members, staff, students and parents, very readily and is always available to provide assistance as needed.

3) **Redesigning the Organization:** Leithwood and Riehl (2005) include in this category of successful practices, building a collaborative culture at the institution, creating structures to encourage participation in decision-making, and building productive relationships with parents and the wider community.

As stated by Anton Chekov, knowledge is of no value, unless put into practice. This is the guiding principle for the Leader of this B-school in Pune. He provides a platform for students to apply their knowledge while on campus. The industry demands graduates "WHO DO" and not those "WHO JUST KNOW". He has introduced some of the teaching methodologies which bring in experiential learning, leverage technology and gaming/ simulation- based learning. Incorporating these has enabled a long way to bridge the gap of knowledge to application. He has created a culture of trust, open news, equity and consensus.

B) Factors giving rise to successful Academic Leadership

Leithwood and Riehl (2005) state that factors stimulating successful leadership practices could include, for example, on-the-job learning, professionaldevelopment experiences, socialization processes and individual traits. These are factors both internal to leaders, as wellas features of their external environments.

The Director of **Institution A** displayed a keen awareness pertaining to all the factors that give rise to successful Academic Leadership, viz:

1) His concept of ***'educational quality'***is inclusive of the learners/students, the intellectual capital, the infrastructure, the industry-institute interaction, pedagogy, curriculum, use of advanced technology, research, processes and outcomes.
2) ***He displayed an in depth awareness regarding the role of academic leaders*** in Systems Development, Stakeholders' & Facilitators' development and development of the human capital in the context of meeting the challenges of globalization.
3) He ***stated the need for academic leaders*** to be groomed and trained in the following areas for the qualitative growth of Higher Educational Institutes.
   a) Knowledge of institutional policies and related regulations.
   b) Hiring, selecting, and evaluating faculty and staff.
   c) Participating in student and faculty recruiting efforts.
   d) Using leadership skills in the office and academic administration.
   e) Managing people and finances.
   f) Developing faculty and staff.
   g) Carrying out administrative duties.
   h) Goal setting and planning.
   i) Participating in various roles in team efforts.
   j) Participating in institutional governance.
   k) Participating in interdisciplinary curriculum development.
   l) Representing the institution, department, or discipline
   m) Participating in outreach and community efforts. (CSR Initiatives)
4) ***He emphasized the need to*** incorporate web-based technologies as a part of the pedagogy, which enhances faculty learning by providing faculty with more ways to communicate, exposing them to a collection of internal and external online resources.
5) ***He also emphasized the need to create awareness for the private higher education industry*** *that only academicians should lead academic organizations. The reason for that is universities are such unique organizations that, if anyone can understand them sufficiently or get a modicum of support from the faculty without being involved with them closely are the people from academics.*

C) Variables linking Academic Leaders' practices to student learning

The indirect nature of a high proportion of school leadership effects has prompted research about those variables orconditions in classrooms and schools that:are open to significant influence by those in leadership roles; andproduce demonstrable improvements in student learning.Variables meeting both these requirements are identified in the Institution A under study. Classroom variables fitting this description include: Time on task, Quality of instruction/instructional climate, Curriculum, Safe and orderly climate, Faculty and staff participation in decision making, school culture, faculty commitment, etc.

The Director of **Institution A** has dynamically contributed for the personal and professional development of the students,faculty members and society at large.

i. He has taken initiatives to bring the industry and academia together and fill in the gap. For instance, he has tied up with the Stock Exchange Training Institute, Mumbai, and decided to introduce an MBA in Financial Markets because it realized that MBA Finance is not good enough to handle financial markets. To conduct activities that would enable students to relate to the society. For instance, he made his students spend a day with the expansive dabba wallahs association in Mumbai to learn operations management, strategic approach & human resource management. He along with his team of faculty members have made attempts to develop in the students a global perspective with an Indian mindset by encouraging students to start their own enterprises with could range from a Tiffin service to an online store in order to inculcate the sense of ownership from the beginning & learn the nuances of business management. Marks are given to students on registering their company, on developing a product & even on opening a bank account for their company.

ii. Along with the support from the management, he intends to start incubation cells and organize business plan contests to enhance the decision making, entrepreneurship, communication skills of the students.

iii. In order to develop leadership skills in the students, he has organized, leadership development programmes for students wherein students adopt children from the slums, spend the weekend mentoring them, guiding them on their studies & career and also inculcate ethics, by conducting reading of the religious scriptures.

iv. So as to develop the emotional and social quotient of the students, because employers do consider EQ, social bent of mind & concern for society and environment as important aspects of the students' personality, he has made his students work closely with NGO's and analyze, why a certain problem is happening, find solutions on the basis of knowledge gained in the classrooms.

v. To develop a creative, innovative and strategic bent of mind among the students, he has introduced "DESIGN THINKING" for students, which enables students' thinking out of the box in the classrooms, wherein the programme encourages the students to employ design thinking. Students handle projects such as making readymade products without preservatives or re-designing a sugarcane machine.

vi. To develop the administrative and managerial skills of the students, he has redefined the credit system of his institution, wherein 10 out 36 total credits are based on activities done outside the classroom. One these programmes, Assessment and Development of Managerial and Administrative Potential or ADMAP, have students literally run the institution. The ADMAP programme divides the students into 22 committees that run the college's administrations right from academics to public relations.

vii. Besides, he also is striving for international accreditation, by Association of MBAs (AMBA), European Quality Improvement System (EQUIS), the Association to Advance Collegiate Schools of Business (AACSB). This would ensure international recognition, and further enhance the quality of his B-schools.

Institution B

The Director of Institution B had pessimistic and not good enough inputs regarding the implementation of successful leadership practices, factors that give rise to it and also the effects of these practices on the students' performance. He stated that due to the heavy interference of the management/owners the Academic leaders though bestowed with potential and capacity did not have a free hand in executing their duties. This has resulted into a very clichéd working pattern within the confines of the managerial/owner grid. Certain management issues and practices that inhibit the growth of the institution noticed were:

i. Lack of effective communication between the head of institution, faculty members and other stakeholders, which is more of orders rather than consultation.
ii. Resources are poorly managed and misused denying good services to students and faculty members.
iii. The Director is never involved in quality assurance processes because the management does not feel the need for his involvement.
iv. This academic institution has been made a business center with the sole purpose of making money.
v. The institution B is under the extensive umbrella of the same management and needs to go in for sharing of resources, infrastructure facilities ,funds, which does not give an independent identity to either and keeps the WORKFORCE unhappy.
vi. The contract system of appointments is a typical feature of this institution as a result of which faculty members keep on moving out almost every after one or two years. They do not have a sense of belongingness towards the institute and lack dedication and devotion towards it.
vii. The lop-sided uneven utility of funds leads to inadequate and improper infrastructure which does not lead to a conducive work environment.
viii. No transparency in the pay policies of the employees.
ix. Lack of advanced equipments for teaching and research.
x. Accountability and Transparency: Creating a transparent, logical and well understood set of rules for budgeting and accounting are lacking in the Institution.
xi. No efforts for strengthening the Industry-Institute Interface, nor the Faculty student exchanges on the national or international front.
xii. No efforts for the professional development of the faculty members and students. Etc.

D) Conditions enhancing or diminishing the efforts of the Academic Leaders

This section specially throws light on the conditions which depress, neutralize or enhance the strength or nature of relationships between leadership practices and their effects onstudents and the institution. Bringing about a qualitative change is not an easy task for these leaders due to the unresponsive administrative processes. So these academic pillars have to have a strong commitment to the mission of Higher Education as this change requires consistency in work and implementing effective practices.

i. Time and Support for Personal and Professional Development of the Faculty Members by the Heads of the Institutions and Management.

ii. Sanctioning and consistency in budget for a state-of arts infrastructure.

iii. Formal leadership training for the academic leaders.

iv. A strong Industry- Institute Liaison.

v. Inculcation of a research orientation and a thirst for knowledge among faculty members by appropriate motivation strategies in the form of rewards and recognition

vi. Revision of Salary and Employment Conditions of the teaching fraternity to attract talented personnel to the teaching industry.

vii. Shift from the Traditional to the Non traditional methods of teaching for the students.

viii. Academic Advising-It synthesizes and contextualizes students' educational experiences within the frameworks of their aspirations, abilities and lives to extend learning beyond campus boundaries and timeframes.

ix. Internationalization of the curriculum which could be defined as an effort to introduce an international, intercultural or global dimension into course content and materials and into teaching and learning methods.

x. Administrative leadership which includes a variety of positions that involve managing groups of various sizes and compositions such as trustees, departments, administrative office etc. Mostly administrative leadership involves hiring (and sometimes firing), resource allocation, alumni engagement and managing the changing and complex roles of faculty, staff and students.

xi. A congenial climate which forms the emotional feel of a campus, department or course where in students feel welcome, intellectually stimulated, emotionally and socially supported.

xii. Marking Scheme- Marks are one of the main means of signifying the level of learning of the students. However, marks do not communicate much information about the kinds of complex, cognitive, affective and motor learning. Academic leaders have to design a marking scheme that would besides learning represent attendance or participation of the student in class activities his/her cognitive achievement, his/her critical thinking skills etc. This would ensure better student engagement and improve employability skills.

xiii. Provision of Out of Class Learning to students via industry internships, industry based projects, national and international social competitions, 24 hours dialogue with the faculty, a Wireless Laptop for Every Learner, expansion of a Wireless Infrastructure, and provision of technical experts.

Conclusion

Working within the framework of the management is walk on a tight rope for the academic leaders as the routine administrative tasks leave them with no time to lead or think or operate strategically. Many educational institutes in India lack management that is conducive for academic and research activities to thrive. In order to be productive and prosperous, higher academic institutions should be administered by creative minds. The majority of people who play the most important roles in the management lack modern management traits that are important and these people are rarely top academicians.

Higher academic institutions are places where knowledge creation and development is supposed to take place. In order to accomplish this goal, higher academic institutions must be managed by persons of academic standing who have the ability to offer quality leadership that will result in the achievement of the institutional objectives. They must be persons who value knowledge and know how to create it through the efficient use and organization of academic resources, like the Director of Institution A. The faculty members and students can carry out research and undertake new initiatives to enrich academics. The conventional way of management is driven by the constraints for faculty members and students' democratic rights. The recognition of faculty members and students rights should be accomplished by the creation of freedom to exercise those rights. It is the responsibility of the top level management to guide the higher academic institutions to practice democracy and turn them in to places of academic freedom.

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Sector No. 29, Akurdi, Pune, Maharashtra, India.

Pin Code	: 411 044
Tel. No.	: +91 20 27640998
Fax No.	: +91 20 27652794
E-mail	: research@dypimca.ac.in, enquiry@dypimca.ac.in
Website	: www.dypimca.ac.in

Concept and Design: Ms. Dipti Nashine, Assit. Prof, D. Y. Patil Institute of Master of Computer Applications and Management, India