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Management Research Journal

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Invite for paper submission for October - December 2016 issue

Non - Thematic

The theme for the coming journal is Non- Thematic. The Thematic method connects subjects, topics and themes naturally. Learning opportunity, thus is extended beyond one class. As this issue is Non Thematic the authors can choose any them of their choice and submit the paper. To write one, you will need to think deeply about some aspects of the readings. Often the part that takes the longest is coming up with a theme and figuring out what you want to say about it. But doing this thinking and processing will make the information "stick" in ways that will help you recall it and, more importantly, use it in your own work. It doesn't matter if I agree with your position, as long as you support it with evidence.

This issue of the Journal SURYA-THE ENERGY October - December 2016 invites papers that explore the key approaches (Non - Thematic).

Papers are invited on the above theme by 30th of November 2016. The length of the article should be between 3000 and 3500 words. It is absolutely necessary to provide the required references in the body of the text, so that the readers are informed about the sources of the data, information, views or opinions. Further, the author is solely responsible for the accuracy of all the figures, quotations and references. Please follow APA style of referencing.

Submit your papers to:

Mrs. Neha Inamdar
Associate Editor
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From the Desk of Chairman, Editorial Board...

Like previous issues, this issue of Synergy – A Quarterly Management Journal for the quarter ended September 2016 also contains an array of interesting articles covering Fashion Design like Impact of Visual Effect in Fashion World, a study of ethnic fabric by designing western silhouette for pre-school girls, Online Shopping of clothing and its effect on consumer, Enhancing tribal livelihood through watershed development, Challenges in Creation of Digital Infrastructure, Growth of school education in India, Innovation and Creativity in Indian Business Industry, Forest Resources – An Ideal Alternative for Tribal Development and Health Care, Modelling from e-Learning for U-Learning , etc., to name a few

The Editorial Board takes the opportunity to thank all the contributors for whole heartedly extending their support through research papers and articles, consequently in bringing out this July-September, 2016 Issue.

The content and standing in all the published articles are exclusive views and personal opinions of the respective authors and they do not necessarily reflect the official views and opinions of the Institute. We hope this Issue would definitely bring innovative value addition in your existing knowledge.

Happy Reading!!

Prof. (Dr.) Sanjay B. Chordiya
Founder President & Dean Academics
Email : dean@suryadatta.edu.in

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Effect of Online Shopping on Consumer

Samiya Mujawar

Abstract

Online shopping enables consumers to search for information and purchase products or services through direct interaction with online store. The e-commerce is growing among customers and also the companies are more active online. One industry that focuses on E-commerce is the online fashion industry. This study aims to examine the effect of online shopping of clothing on consumers. In this bachelors study 100 questionnaires were distributed to the female respondents, who are residence of Deccan and Vishrantwadi area of Pune, following simple purposive sampling as a means of data collection. Further discussion about the results, implications, and suggestions for future research are provided.

Introduction

Internet has become as the most popular way for shopping after the first online store was begin in 1990s.Only 20 years ago most of us were unaware to the existence of the internet as a place to shop. Tesco and Asda dabbled with home shopping services via the computer in the mid-1980s, but it was not until the invention of the World Wide Web by Tim Berners-Lee that widespread consumer use of the Internet became a possibility.

With time Electronic commerce is becoming increasingly important to both corporations and individuals as a result of the vast development of technology and the rise in Global economy. The expansion of the use of the internet by organization and people is one of the main contributions to development of E-commerce in terms of E-shopping and internet commerce

Web-retailers can only offer certain ranges of products and services to web-shoppers, including e-banking services, technology gadgets, cosmetics, clothing, and the booking of airline tickets the first groups of products are ones consumers do not need to see personally before purchasing. These products include e-banking services and the booking of airline tickets. This group of products is suitable for Internet shopping because the Internet provides transaction and communication functions. The second groups of products are items consumers prefer to see and touch before purchasing. These products include technology gadgets, cosmetics, and clothing. This group of products is not suitable for Internet shopping because the images and information about the product may not be accurate or sufficient for consumers to perform Internet-based

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H & M Brand
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transactions.

Reasons for growing popularity of online shopping and advantages of online shopping

In the developed world, 77 out of every 100 people are now connected to the internet. This high level of internet penetration coupled with a generation brought up online and familiar with the digitally connected lifestyle, we think has led to comfort in sharing their personal details online. With this comfort in using both the internet and sharing personal details, it seems inevitable that savvy retailers would capitalize on these favorable market characteristics.

Online shopping offers variety of choice. Retailers with shop premises are limited in the amount of goods they can show or even keep in their inventories. That's perfectly understandable, since both represent a significant investment of capital. Internet retailers have no such constraints. They simply have to show pictures and offer descriptions of the entire range, making things much better for consumers.

Where those shopping in retail parks might have to wait for certain items for up to two months, generally online shopping offers a swift dispatch of goods, eliminating that waiting time – after all, once we've spent our money, we don't want to wait.

Online shopping offers so many advantages for consumers. It's easy – retailers deliberately make their web sites simple to navigate and use – and with a credit card you can have anything. The choice can seem almost infinite, and we're no longer restricted to just buying locally or through mail order catalogues. We don't need to bother with opening hours, pushy sales staff, parking, traffic and the hundred other problems that accompany any shopping trip. The process can take as long as you like – or be over in a matter of minutes. You can buy from anywhere in the world. It seems like a Golden Age of shopping.

Consumers certainly believe so, as the e-commerce market has boomed to ridiculous levels. Reduction in the availability of money or credit from banks can't seem to dim the appetite for online shopping.

Drawbacks of online shopping

Although you can find a wide variety of clothing, shoes and accessories online, not being able to try them on in a dressing room can be a disadvantage. If you do shop for these items online, you usually have the option to make a return within a stipulated amount of time and if the item is unused, but often you are responsible for the shopping and handling costs. For this reason finding the right size, buying clothing and shoes online may be more of a disadvantage. On the other hand, a disadvantage of shopping online is that there is no way to know if what you have purchased is what you will receive. When you purchase something physically from a store, you know exactly what you have purchased because you can physically see and inspect the item. When you buy something online you don't know exactly what it is until you get it. Also, items can be damaged in transport (although in most cases the seller will refund you or send you a replacement item).

The main disadvantage of online shopping is that it may not be as secure or private as going to a store. Probably the securest and most private option out there is to go to a store, physically, and

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pay in cash. Obviously this is not an option when shopping online, where you will usually have to give personal information and pay with a credit card. Although SSL inscription (when you see "https" at the start of the web address) protects your credit card and personal information from hackers, it is not 100% safe and your information can be stolen.

For some people, and generally more women than men, they enjoy shopping in the more traditional sense. They may see it as a social activity, and may like the instant gratification that comes from buying something and having it in their possession immediately. This is as advantage of traditional in-store shopping, and a disadvantage of online shopping.

Online shopping won't ever completely eliminate its physical counterpart. Despite the efforts of established fashion brands and retailers to adapt to these changes, we still see disruptions across a variety of processes and barriers: no social proof of purchase, no ability to try items on, and the complicated procedure of returning unwanted items are challenges that still need to be addressed. But there's no going back, and online shopping will become an even more central part of our lives, growing more sophisticated with each passing year.

The Future for Online Shopping of clothes

For over a decade all the talk in business has been about globalization. But it's the Internet and the online world that's the true face of globalization. The online marketplace really is global. With a credit card you can buy almost anything from anywhere in the world. The Internet literally offers a whole new world of shopping.

No matter the economic climate, the forecast is that the amount spent shopping online will keep increasing year by year. However, as there's only a finite amount of money to be spent, if online spending increases, then spending elsewhere has to decrease, and those high street retailers, whether chains or independently owned shops will be the casualties – it's worth noting that most big retailers now also sell through web sites.

Factors that show fashion e-commerce's bright future and overcoming the disadvantages of online shopping

a. Rise in investor confidence

The recent news that Lyst, a London-based fashion e-commerce company, raised $40 million and that Zalando, a German online fashion retailer, is experiencing considerable growth both as a retailer and a financial entity are just a few examples proving that investors are confident in the fashion e-commerce industry.

These big investments are not just a result of fashion's e-commerce progress: consumers' behavioral changes also play a big part in investor confidence. Despite the physical store remaining consumers' favorite way to shop for apparel (62% say they prefer it), a recent survey carried out by Retail Week and Microsoft, showed that 49% of people between the ages of twenty-five and thirty-four prefer shopping online. This age group, known as Millennial, is expected to have more spending power than any generation by 2017. And though only 49% of Millennial prefer to shop online, it is a market segment that fashion brands and investors alike cannot underestimate.

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b. Virtual fitting evolving with smart technologies.

Fitting is one of the most critical points and one of the biggest barriers to shopping for fashion online. According to the same Retail Week and Microsoft survey, when asked what they value about going to a physical store, 58% of consumers say being able to try on products is something that enhances their experience. There are still e-commerce fashion brands that are not doing enough to close this gap, and we still have to deal with poor product galleries and an absence of consumer-generated content and virtual reality or body-scanning technologies. Technology is clearly an area that companies need to invest in to improve customers' online experiences, and several startups are already investing in innovative solutions. Virtualize, for instance, is a fitting solution that allows shoppers to compare clothes they're browsing online to those they already have, helping them find the right fitting. Suit makers have also introduced customization technology: Italian fashion house Brioni has digitized its made-to-measure tailoring to help consumers visualize a completed custom look. Brioni's "Miror" uses 3-D technology to show virtual representations of garments in different fabric and fit options

c. Sharing economy extending to fashion

When we think about the concept of the sharing economy, brands like Airbnb and Uber are the first to come to min d. However, the concept of the sharing economy is also extending to fashion. Millennial who are driving this trend of disowner-ship might not always have the budget to afford expensive clothes, but they still look for great experiences. Services like Rent the Runway, which offers access to designer clothes, or Le Tote, where users can borrow clothes and accessories indefinitely with the option to buy, become a good alternative to a commitment to purchase. Consumers aren't the only ones that benefit from this type of service, either. Brands benefit through boosted sales, reduced returns, and newly converted loyal customers

d. Online shopping as a social activity

The process of buying something is intimately social. Customers walked into a store and made contact with another human. Thanks to new technologies, online shopping is turning into a social activity too: consumers have plenty of tools to connect with their peers and get instant advice, whether from online customer reviews, visual CGC, or even Q&A support where answers are provided by consumers and not just the brand.

According to a survey conducted by Bazaarvoice in November 2013 of 1,500 adult consumers in the United Kingdom, 70% read reviews before making a purchase decision.

The recent news that Net-A-Porter will launch the world's first shop-able social network is another testament that shopping online is a social activity. With its new app, Net-A-Porter will allow users to share their style, preferences, and inspirations while interacting with fellow like-minded consumers, style leaders, designers, and brands.

Indian designers selling online

Some Top Indian designers who sell online are Manish Malhotra, TarunTahiliani, Masaba, AnjuModi,

VikramFadnis, Ritu Kumar, Anita Dongre , PerniaQureshi, etc. The list would go on. This shows that Fashion Industry Has adopted E-commerce.
Various well-known brands have their online websites. Also new and young designers are choosing selling their line of clothes on various websites

Objectives of the study

The aim of the study is to understand the shopping trends in Apparel industry. . The aim is also to identify and analyze online buying habits of consumers in sample area. The most important aim is finding the impact of E-commerce or Online shopping of clothing on consumers
The result of this study would help understand consumer behavior towards online shopping, also understanding the e- tailing of clothing market in sample area.

Scope of the study

- The study is limited to females only; this is a scope as Female consumers make up the majority of online shoppers because they often have greater spending power and enthusiasm for the shopping experiences.
- The area of sample is developed, hence its most likely more involved in online shopping.
- The age group of sample are mostly who easily adapt to new products and services, and are also economically independent.

Review of Literature

E –Commerce

- Ref. "E- commerce Game Changer "IRA SOLEIL"- Estylish" Femina, September 4 2014. September 17 2014 Pune.

- According to the magazine, Indian E-commerce market was worth about $2.5 billion in 2009, it went up to $6.3 billion in 2011 and to $14 billion in 2012. This has pumped up the volume of sales exponentially and at the same time created a kind of level playing ground for big and small players alike. One of brand emerging is "IRA SOLEIL" This is a fusion brand with a modern take on the ethnic designer wear, has made a niche for itself on almost every major fashion portal such as Myntra, Jabong, Flipkart, Amazon, Snapdeal, C bazaar, Homeshop 18 etc.

- Ref. : Maheshwari Richa, ET Bureau. "Indian E commerce market to fastest globally over 3 years: Morgan Stanley "The Economics Times, Bengaluru Feb 2016 http:// economictimes. indiatimes.com/industry/services/retail/indian-ecommerce-market-to-grow-fastest-globally-over-3-years-morgan-stanley/ articleshow/ 51031652.cms

- Morgan Stanley says, India Receives $6.6 billion in venture capital and Private equity investment in 2015, a 50% increase from previous year, which probably contributed to a growth in the gross merchant value for e commerce companies. The growth drivers will be internet penetration, Rise in the number of online shoppers and increase in income. India is adding three internet users every second and is already the second largest internet market globally in terms of users, according to the report dated Feb 2012."We expect internet penetration to increase from 32% in 2015 to 59 % in 2020, translating to a

near doubling of the internet user base," the US Bank said. It estimates India will have almost 320 million online shoppers by 2020 compared with 50 million in 2015.

- Ref. Manish R Sharma Logistics Leader, PwC India, D S Rawat ASSOCHAM "'Evolution of e-commerce in India' Creating the bricks behind the clicks" manish.r.sharma@in.pwc.com, d.s.rawat@assocham.co.

- The study states that online travel dominates the e-commerce industry with an estimated 70% of the market share. However, e-retail in both its forms; online retail and market place, has become the fastest-growing segment, increasing its share from 10% in 2009 to an estimated 18% in 2013. The apparel industry takes second number consisting of 30% of commodity being e-tailed in India after number one 34% electronics.

Online Shopping

- Ref. Dr. Renuka Sharma, Dr. Kiran Mehta, Shashank Sharma ,Associate Professor, Chitkara Business School 3 MBA Student "Understanding Online Shopping Behavior of Indian Shoppers" Chitkara Business School. IJMBS Vol. 4, Issue 3, Spl- 1 July - Sept 2014.

- Study has made an attempt to understand the behaviour of Indian consumers towards online shopping. The study states that ease and convenience provided by online stores for 24x7 has made very easy shopping for consumers worldwide. Indian customers are also getting addicted to the online shopping and they do like various features of online shopping as by rest of the world. Statistics has shown that Indian market is still not a fully developed market for e-tail stores. There is huge scope of web-stores in various areas and in almost all the segments.

- Ref. Prof. SanjeevKumar, SavitaMaan, "Status and Scope of Online Shopping: An Interactive Analysis through Literature Review" . SavitaMaan, Haryana School of Business Guru Jambheshwar University of Science & Technology Hisar-125001 (INDIA).International Journal of Advance Research in Computer Science and Management Studies, Volume 2, Issue 12 December 2014 pg. 100-108. The study indicates that online shopping has become part of a daily life mainly because it's easy to use. India's online market is at an early stage but is expected to see huge growth over the next four to five years. Consumers are looking for trust, Security and privacy of information, timeliness, availability, convenience, customer service, prices and wider selection during online shopping.

- Ref. Dr. SeemaAgarwal Asst. Professor Ghanshyamdas Saraf College "A STUDY OF FACTORS AFFECTING ONLINE SHOPPING BEHAVIOUR OF CONSUMERS IN MUMBAI REGION". Tactful Management Research Journal, ISSN: 2319-7943, Impact Factor: 2.1632(UIF).

- Study has made an attempt to understand the behavior of Indian consumers towards online shopping. This research shows that online shopping is having very bright future in India. Perception towards online shopping is getting better in India. The generalized results obtained through data analysis have given close

indication of increasing significance of online stores in the life of Indian people and their online shopping behavior. The e-stores are frequently visited by the shoppers. The ease and convenience provided by these stores for 24X7 has made very easy shopping for consumers. With the use of internet consumer can shop anywhere, anything and anytime with easy and safe payment option. Consumers can do comparison shopping between products as well as online stores by saving time and money.

- Amit Saha. A Study on "The impact of online shopping upon retail trade business".Royal School of Commerce Royal Group of Institutions (RGI) Guwahati, Assam. OSR Journal of Business and Management (IOSR-JBM), e-ISSN: 2278-487X, p-ISSN: 2319-7668. PP 74-78 www.iosrjournals.org

- The findings of the study are that Retail stores are now starting up with home delivery services of their various products at the door step of their customers. The consumers become more comfortable with the experience of purchasing online with the convenience and product range become relatively more important as a deciding factor for shopping online. The face of retail has changed. The growing technology is the main reason for it. Today retailing means going into shopping centers, going online and using Mobile as well.

- Ref : Jayendra Sinha, Jiyeon Kim. "Factors affecting Indian consumers' online buying behavior" Innovative Marketing, Volume 8, Issue 2, 2012.

- The study states, People in India are using Internet for last few years (on an average more than 3 years) for different purposes like, banking, buying travel tickets etc. but not for anything for which they do not need to queue up. The reasons as quoted by Channel Push's (www.channelpush.com) article – State of Online Retailing in India are, slow building up of Internet infrastructure, lack of interactive and informative websites and unwillingness on the part of retailers. The results of this study shed insights of online retailing in India – specifically factors affecting Indian consumers' online buying behavior. Although the convenience risk seemed to be the only factor significantly affecting Indian consumers' online purchases, when looking at male and female perceptions, there were different factors affecting male/female consumer's behaviors. For female attitude has been significant factor for online shopping behavior while among male innovativeness was significant which meant females frame their opinion then they will go ahead without considering risks if the process is easy and user friendly while male will gauge various risks before shopping online. The study found that the majority of people who bought online more number of times were in the age group of 40-49 years. This is different from common prediction that younger people who will be more proficient in Internet use and hence likely to buy. Although it has been pointed out by Järveläinen (2007) that customizing the system as per the requirement for different demographic groups is not advisable, but the system should be easy to use keeping in mind for inexperienced customers and allowing experienced users some customization options

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could be attractive.

- Ref. : Ms. Dipti Jain, Ms. Sonia Goswami, Ms. ShipraBhutani, "Consumer Behavior towards Online Shopping: An Empirical Study from Delhi".

- This research work is an attempt to explore the factors that may affect the attitude of consumers in Delhi towards online shopping.. The results revealed four important factors viz. perceived risk, perceived enjoyment, perceived ease of use and perceived usefulness to be affecting the online shopping behavior of consumers in Delhi. There is a significant relationship between perceived risk and attitude toward online shopping and the remaining three hypothesis have been rejected i.e. there is no significant relationship between online shopping and perceived enjoyment, perceived ease of use and perceived usefulness. Out of four, Perceived Risk is the most significant factor that may affect online shopping behavior of consumers in Delhi. Perceived risk indicates the lack of trust among consumers and many other reasons like that of chance of being cheated, inferior quality of products, non-returnable policy etc.

Fashion Industry and E-commerce

- Ref. : Gini Stephens Frings. Fashion From concept to consumer. Seventh edition, published by Dorling Kindersley (India) Pvt. Ltd. 2008, pg. 323-324.

- The author states, there is a huge increase in the number of people accessing the internet, and similar rise in the number of commercial sites. Online apparel sales are Fourth after media (books and music), travel services, and computer software. Internet has opened up global markets. It reaches people without the cost of running a store. It is also possible to present an actual "virtual store "online. People can see shelf or a wall or a display, just like they would at the real stores. Forecasters predict that the internet will handle half of all apparels sales in future.

Methodology

Operational Definition

Keywords
Internet
E-commerce
Online Shopping
Online Shopping Behavior

Definitions

- E-commerce: commercial transactions conducted electronically on the Internet.

- Online shopping: Online shopping (sometimes known as e-tail from "electronic retail" or e-shopping) is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser.

- Internet: A global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.

- Retail: Retail is the process of selling consumer goods and/or services to customers through multiple channels of distribution to earn a profit

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- E-tailing: E-tailing is the selling of retail goods on the Internet. Short for "electronic retailing," and used in Internet discussions as early as 1995, the term seems an almost inevitable addition to e-mail, e-business, and e-commerce.

- Globalization: The process by which businesses or other organizations develop international influence or start operating on an international scale.

- Internet Penetration: The portion of the population that has access to the Internet compare to the whole population is called internet penetration.

The sample

Females aged 22 to 26 were selected for answering the questionnaire.
The reason behind selecting this age group is because they are usually the earliest adopters of new product and concepts. Female consumers make up the majority of online shoppers because they often have greater spending power and enthusiasm for the shopping experiences. Even though male consumers are also important for online shopping, most of them spend less time than female customers. Moreover, nearly all females have greater interest in purchasing clothing. Therefore, female's online apparel shopping behaviors and activity is observed.
The location of study is Deccan and Vishrantwadi in Pune.
The sampling method is purposive. 100 samples were studied for research.

Experimental work

Globally, retailers have had to adapt to the changes ongoing in the market in order to survive. The survey was basically done to understand the local market scenario and also how they are adapting to online shopping. In Europe, where the prevailing culture of online shopping is more mature, retailers are investing in developing multiple channels with which to do business with shoppers. The multi-channel approach means that retailers are ideally indifferent to where a purchase occurs, in person, online, through a mail order catalogue. The key to success is quality experience for the customer.
To understand the market scenario in Pune, Survey of 50 local clothing Retails was done in Pune. Questionnaire was used in the research method.

Data collection

Tools

Survey
In order to collect data from view point of consumers, the strategy of the research is the survey. To investigate consumer behaviors and purchasing decisions, a quantitative approach is used to analyze the results from the survey. Survey in the form of questionnaire is chosen for this research. Surveys are a kind of research which is more rigid than interviews. They are usually used to gather ideas from a large population. Each respondent is asked to respond to the same set of questions, it provides an efficient way of collecting responses from a large sample prior to quantitative analysis.
The questionnaire was published on paper.
After finalizing the questionnaire, they were distributed to the selected samples.
In both the surveys questionnaire was chosen for the research.

Percentage and Ranking

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The data in research is explained using descriptive statistics.
The process is to transform the raw data from the results of questionnaires into numerical data.
It is then followed by a calculation for each question.
The data are presented in the form of tables or charts and following a detailed explanation of the figures is offered.

Further Recommendations

The present study is based on online shopping done by females, further both the gender can be taken into account for research. Further, studies can be conducted by taking into account larger geographical area i.e. respondents from different states of India. The present study was about clothing, in further study fashion accessories such as shoes, bags, jewelry can also be include. Also the data collection method can be done using internet. A free service website, Google Spreadsheets, can be used for the survey and allow participants to answer the questionnaire online.

Limitation of the study

- This sample size is only a very small proportion of the entire population of people who shop online.
- Geographical area is limited to 2 part of Pune city only.
- The study limits to online shopping of clothing only, and no other fashion accessories.
- Despite increase in study of effect of online shopping on consumers, there is lack of prior research on Effects of online shopping of clothes.

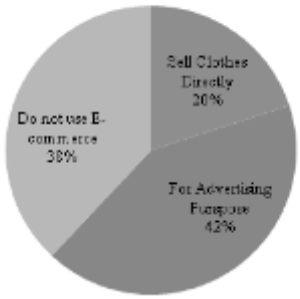
Data Interpretation

4.1 Survey of local retailers

The survey was conducted in Pune, 50 local clothing retailers were choose randomly to fill the questionnaire.

4.1.1 Use of E-commerce for selling clothing product (including social networking sites)
31sample use E-commerce for respective uses.
Out of which only 10 samples do online selling of clothing directly,
Rest 21 samples use only for advertising purpose.
19 samples do not use E-commerce.

4.1.1 Use of E-commerce for selling



As the Study shows, only 20 % of local retailers are selling their clothing products online. Rest 42 % only use for Advertising purpose.

4.1.2 Reason for selling online of the product
Out of 10 samples who directly sell clothing products,
7 samples do not have physical shop or boutique
3 samples have their shop or boutique.

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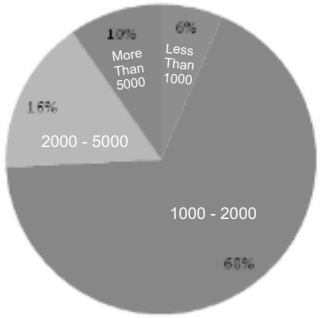
The research states that 70% of retailers who are selling their product online do not have their own stores or boutiques and hence are using e-commerce.
30% of retailers are using e-commerce to enhance their service and income.

4.1.3 Products and services provided.
The products include all the clothing categories, such as men's wear, women's wear and kids wear, hijabs etc. The other services offered are stitching services, home delivery services and payment Options.

4.1.4 Price range of products

Out of 31 samples that use E-commerce, 2 sample sell clothes, of less than 1000 rs, 21 samples sell between 1000-2000, 5 sell between 2000-5000, 3 samples sell for more than 5000.

4.1.4 Price range of products



The results show, 68% of samples sell clothing between 1000-2000, 16% sell for 2000-5000, 10% sell for more than 5000 and 6% sell for less than 1000.

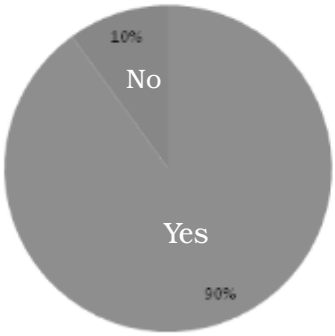
4.1.5 Customer Response
Out of 31 people who use e-commerce for overall purpose, they have stated the response is fairly good.

This survey was just a pre-survey done to understand the current market situation of e-commerce in local area. As the above statistics shows only 20% of retailers are directly selling their products to the customers. 20% is very small number compare to the demand of the consumers for online shopping.

4.2 Preferences of response.

4.2.1 Preference of online shopping.
Out of 100 samples, 90 samples prefer online shopping,
10 samples do not prefer online shopping.

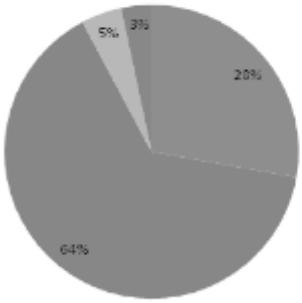
4.2.1 Preference of online shopping



The study states, 90% of females have shopped online

4.2.2 Frequency of shopping in a year.
Out of 90 sample who shop online, 25 sample shop once in a year.
58 sample shop once in a month,
4 sample shop once in a week,
3 sample shop more than once a week.

4.2.2 Frequency of shopping in a year



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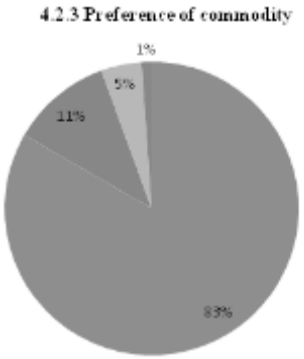
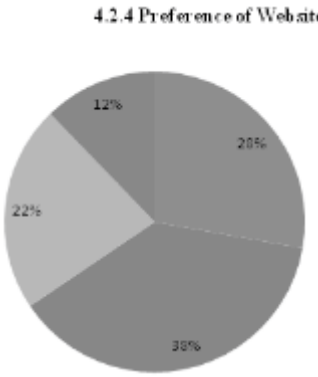
The study states 66% of females shop once in a month, 28 % of females shop once in year, and 5% and 1% of females shop weekly and more than that respectively.

4.2.3 Preference of commodity.
Out of 90 samples who shop online 75 samples prefer shopping of clothing,
10 samples prefer clothing as well as Electronics commodity,
4 samples prefer clothing as well as groceries,
1 sample prefers clothing and other commodity.



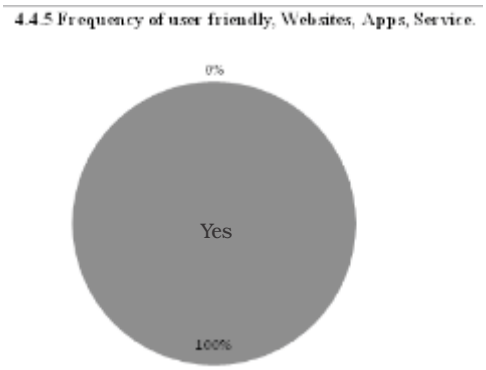
The study states 83% of females shop for clothing, 11% of females shop for clothing and electronics, 5% females shop for clothing and groceries, 1 % shops for clothing as well as other commodity.

4.2.4 Preference of Websites.
Out of 90 samples who shop online, 25 samples choose Amazon,
35 samples choose Flipkart,
20 samples choose Myntra,
11 samples choose other sites.



The study states, 38% of females prefer to shop on Flipkart, 28% prefer to shop on Amazon, 22% prefer to shop on Myntra and 12% of females choose to shop on other websites such as voonik, jaboong, shopclues, patym & ebayetc.

4.2.5 Frequency of user friendly websites, Apps, services.
Out of 90 samples who 90 samples have said yes the websites, apps or services they use are users friendly.



100% females who shop online feels the websites or apps or services they use are user friendly.

4.2.6 Frequency of spending amount on single purchase.
Out of 90 samples who shop online, 18 samples spend less 1000rs on a single purchase,
49 sample spend 1000-2000rs,

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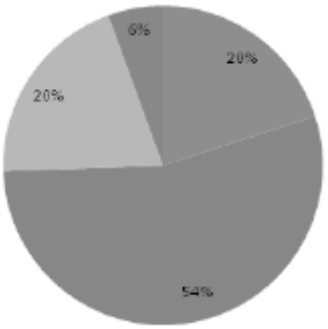
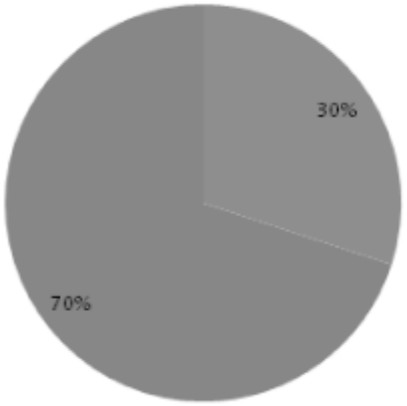
18 sample spend 2000-5000rs
5sample spend more than 5000rs



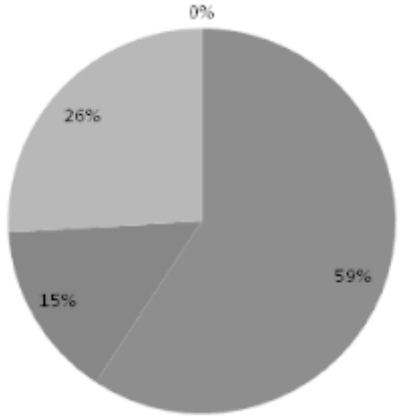
The study states, 54% females spend between 1000 -2000, 20% females spend less than 1000, 20% females spend between 2000-5000, 6% of females spend more than 5000rs in a single purchase.

4.2.7 Frequency of problem while conducting online shopping of clothing.
Out of 90 samples who shop online,
27 samples have had problems while conducting online shopping of clothing.
63 samples have not had any problems while conducting online shopping of clothing.



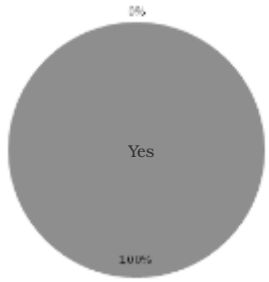
The study states, 70% females have not felt any problem while shopping for clothing online, whereas 30% have felts problems which are described in 4.4.8.

4.2.8 Problems felt during online shopping of clothing.
Out of 27 samples who have had problem while conducting online shopping of clothing,
16 samples have had Fitting Problems,
4 sample have had cheap quality or damaged product,
7samples have had problem with delay in delivery,
0 samples have had any other problem.



The results states, 59% females have felt fitting problems, 26% have suffered delay in delivery, 15% have received cheap quality or damaged product, none have had any other problems.

4.2.9 Preference of clothing purchase of clothing online.
Out of 90 samples who shop online, 9 0 samples have said they will Continue shopping Online for Clothing.



None have said they will not continue shopping online for clothing.
The study States that 100% of females who shop online would continue to make purchase of clothing online despite the problems felt during the purchase.

4.2.10 Overall experience of shopping online, for clothing.
Out of 90 samples, most of the females said their experience was good.
Even though some have faced problems while conducting shopping of clothing, they would continue their shopping of clothing online and have rated it average. Some have said it's easy to shop online. They are getting great choices and offers. Due to this offers and compatibility of shopping online, they would continue to shop for clothing online.

Conclusion

The purpose of the study was to find the effects of online shopping on consumers. The consumers consisted females aged between 22-26, this could be reason for preference of clothing than other commodities. If males would also have included the number would have definitely be different. According to the findings of study 90 percent females prefer to shop online for clothes. The reason for this is ease and comfort, most importantly great price and offers. Even though at some level all have face problems while shopping, they will still go back to shopping online; maybe they would prefer different websites. The study can conclude that the e-commerce can never get out of the league. One of the key and significant factors in online shopping is consumer satisfaction.
In the survey done for local retailers, it can be seen that for customer satisfaction the retailers are adopting e-commerce. Thought the acceptance of e-commerce is on small number in local market. Larger numbers of People are doing online shopping on the tops websites. The stores and various brands are also are also going virtual. Improvement of services is needed for better customer satisfaction.
With several limitations of this study, future research is mainly directed to improve the research tools and to explore more factors influencing online shopping.

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https://en.wikipedia.org/wiki/Main_Page

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SURYADATTA

A Study the Op Art and Pop Art and to Develop The Unique Designs on Kurties and T-shirts with the Technique of Hand Painting"

Pooja Vishwakarma

Abstract

This project had been undertaken "to study the op art and pop art and develop the unique designs on kurties and t-shirts with technique of hand painting" to check the acceptance of the products. 30 original motifs were modified and 5 designs of op art and 5 designs of pop art were selected by experts. Questionnaire was developed to check the acceptance of printed designs by college going girls 100 respondents were selected purposively from Karvenagar. Ranking method was given in the questionnaire to select 3 best designs. Designs with calligraphy on T-shirts were preferred by many respondents and also innovative patterns of kurties. Majority of respondents preferred these products for their casual wear and willing to buy the T-shirts and Kurties at Rs 350/-

Introduction

Historical Background

Scientists did not invent the vast majority of visual illusions. Rather they are the products of artists who have used their insights into the workings of the human eyes and brain to create illusions in their artwork. Long before visual science existed as a formal discipline, artists had devised techniques to "TRICK" the brain into thinking that a flat canvas was three-dimensional or that a series of brush strokes in a still life was in fact a bowl of luscious fruit. Thus, the visual arts have sometimes preceded the visual sciences in the discovery of fundamental vision principles through the application of methodical-through perhaps more intuitive-research techniques. in this sense , art , Illusions and visual science have always been implicitly liked.

It was only with the birth of the op art movement that visual illusions became a recognized art from the movement arose simultaneously in Europe and the U.S. in the 1960s, and in 1964 Time Magazine coin the term "**Op Art**".

Op Art works are abstract, and many consist only of black-red-white lines and patterns. other use the interaction of contrasting colors to create a sense of depth or movement.

This style became a hugely popular after the museum of Modern Art in New York city held an exhibition in 1965 called **"The Responsive Eye".** In it , op art artists explored many aspects of visual perception, such as the Relations among geometric

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shapes, variations on "impossible" figures that could not occur in Reality and Illusions involving brightness, color and shapes perception. But "kinetic" or motion Illusions drew particular interest. In these eye tricks, stationary patterns give rise to powerful but subjective perception of illusory motion. Time Magazine coin the term "OP ART" in 1964, in Response to Julian Staczak's show optical paintings at the Martha Jackson Gallery, to mean a form of abstract art (specially non objective art) that uses optical illusions. Works now described as "Op Art" had been produced for several years before Time's 1964 articles. For instance, Victor Vasarely's paintings ZEBRAS (1938) is made up entirely of curvilinear black and white stripes not contained by contour lines. Consequently , the stripes appear to both meld into and burst forth from the surrounding background Also the early black and white **"dazzle"** panels that John McHale installed at the This is Tomorrow exhibit in 1956 and his Pandora series at the Institute of Contemporary Arts in 1962 demonstrate proto-Op art tendencies. Op art perhaps more closely derives from the constructivist practices of the Bauhaus. This German School, founded by Walter Gropius, stressed the relationship of form and function within a Framework of analysis and rationally. Students Learned to focus on the overall design or entire composition to person united works Op art also stems from Trope-oeil and Anamorphosis links with Psychological research have also been made, Particularly with Gesalt theory and Psychophysiology. When the Bauhaus was forced to close in 1933, many of its instructors field to the united states. There the movement took root in Chicago and eventually at the Black Mountain College in Asheville, North Carolina, where Annie and Josef Albers eventually tough.

History of -Pop Art

"POP art is everything art hasn't been for the last two decades. It's basically a u-turn back to a Representational visual communication, moving at a breack-awayspeed.....pop is a re-enlistment in the world. It is the American Dream, Optimistic, generous and naive".

POP art is now most associated with the work of New York artists of the early 1960s. Such as Andy Warhol, Roy Lichtenstein, James Rosenquist, and cles Oldenburg, but artists who drew on popular imagery were part of an international phenomenon in various cities from the mid 1950s onwards following the popularity of the Abstract. An expressionist, POP's reintroduction of indenitifable imagery (drawn from mass media and popular culture) was a major shift for the direction of modernism. The subject matter became far from traditional "high art" themes of morality, mythology and classy history, rather, pop artists celebrated commonplace objects and people of everyday lift, in this way seeking to elevate popular culture to the level of fine art. Perhaps owing to the incorporation of commercial images, POP art has become one of the most recognizable styles of modern art. POP art is an art movement that emerged in the mid 1950s in Britain and the late 1950s in the United States. Among the early artists that shaped the POP art movement were Eduardo Palazzo and Richard Hamilton in Britain, Robert Rauschenberg Jasper Johns in the United States. POP art presented a challenge to traditions of fine art by including imagery from popular culture such as advertising and news. In POp art, material is sometimes visually removed from its known context, isolated, and / or combined with unrelated material.

POP art employee's aspects of Mass culture, such as advertising, comic books and mundane culture objects. One of its aims is to use image of popular (as opposed to elitist) culture in art, emphasizing the banal or kitschy elements of any culture, most often through the use of irony. It is also associated with the artists use of mechanical means of Reproduction or rendering techniques.

POP art is widely interpreted as a reaction to the then-dominant ideas of abstract expressionism as well as an expansion of those ideas. Due to its utilization of found objects and images, it is similar to Dada. POP art and minimalism are considered be art movements that precede postmodern art, or are some of the earliest examples of postmodern art themselves.

POP art often takes imagery that is currently in use in advertising product labeling and logos figure prominently in the imagery chosen by POP artists, seen in the labels of Campbell's soup cans by Andy Warhol. Even the labeling on the outside of a shipping box containing food items for retail has been used as subject matter in POP art as demonstrated by Warhol's a Campbell's Tomato Juice Box (1964). Pop art is widely interpreted as a reaction to the then-dominant ideas of abstract expressionism, as well as an expansion of those ideas. Due to its utilization of found objects and images, it is similar to Dada. Pop art and minimalism are considered to be art movements that precede postmodern art, or are some of the earliest examples of postmodern art themselves Pop art often takes imagery that is currently in use in advertising. Product labeling and logos figure prominently in the imagery chosen by pop artists, seen in the labels of Campbell's soup cans by Andy Warhol. Even the labeling on the outside of a shipping box containing food items for retail has been used as subject matter in pop art, as demonstrated by Warhol's Campbell's tomato juice box, 1964 (pictured).

The origins of pop art in North America developed differently from Great Britain In the United States, pop art was a response by artists; it marked a return to hard-edged composition and representational art. They used impersonal, mundane reality, irony, and parody to "defuse" the personal symbolism and "painterly looseness" of abstract expressionism.13111 In the U.S., some artwork by Alex Katz and Man Ray anticipated pop art.13 By contrast, the origins of pop art in post-War Britain, while employing irony and parody, were more academic. Britain focused on the dynamic and paradoxical imagery of American pop culture as powerful, manipulative symbolic devices that were affecting whole patterns of life, while simultaneously improving the prosperity of a society Early pop art in Britain was From the first meeting, in 1952, when Paolozzi presented a number of collages assembled from magazine clippings and other "found objects", including his (now) celebrated collage entitled "I was a Rich Man's Plaything" (created 5 years previously in 1947) their discussions centered largely around the artistic value and relevance of popular mass culture. Four years later, in 1956, another member of the group, Richard Hamilton, produced his own collage, "Just what is it that makes today's homes so appealing?" - Which, along with Paolozzi's 1947 collage, is regarded as one of the earliest examples of British Pop-Art. In 1961, a number of Pop-style works by Derek Bushier, David Hockney, Allen Jones, RB Kitaj and Peter Phillips, featured in the Young Contemporaries Exhibition. In

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1962, further publicity was given to British Pop when the BBC screened "pop goes the ease ", a film by Ken Russell which explored the new movement in Britain.

Objectives

- To study the op and pop art
- To study the famous designs in pop art
- To study the various patterns suitable for pop and op art
- To study the price range affordable for every class
- To study various Printing Techniques
- To study the origin of op and pop art
- To study the various color combinations

Scope of the Study

- Study the op art in various produces
- Various color combinations use a according to the patterns or products
- Developing printing techniques
- Design can used on upholstery, wall hanging, accessories, and on garment also

Review of Literature

Studies Related to OP ART

MACKAY RAYS says, This illusion, created in 1957 by neuroscientist Donald M. Mackay, then at King's College London shows that simple patterns of regular of repetitive stimuli, such as radial lines (called Mackay rays can induce the perception of shimmering or illusory motion at Right angles to those of the pattern. To see the illusion, look at the centre of the circle and notice the peripheral shimmering.

Bbc Wall Board: This illusion began with a chance observation. Mackay First saw it on the wallboard of a BBC Studio, the broadcasting staff had been annoyed by illusory shadows running up and down blank strops between columns of parallel lines.

Op Art is Alive and Well: Akiyoshi Kitaoka, a professor of psychology at Ritsumeikan university in Japan follows in the footsteps of the great op artists of the 20th century. Waterway spirals is a compelling and powerful version of French op artist Asia Leviant's now classis enigma observe the strong illusory motion along the blue spiraling stripe.

The Enigma Illusion : Look at the centre of the above image andnoticehow the concentric green rings appear to fill with rapid illusory motion, as if millions of tiny and barely visible cars were driving hell bent for leather around a track Neuroscientist and engineer Jorge Otero - Millan of the Barrow Neurological Institute in Phoenix created this image as a reinterpretation of Enigma by Leviant, who unknowingly combined the Mackay rays and the BBC wallboard.

Bridget Riley's Motion Illusions: Eye movements, both large and small, can trigger most of the motion illusions in this article. BLAZE, a 1964 screen print by English op artist Bridget Riley (Left), given the impression of fast spiraling motion as observers move their eyes around the image. Fall (Right) painted by Riley in 1963, has curved lines that create illusory undulations and volume, Both works are in the Tate gallery in London. The 1965 MOMA Exhibition "The Responsive Eye" drew worldwide attention to Riley's op art.

Riley Revisited: In a work reminiscent of Riley's vision scientist Nick Wade of the University of Dundee in Scotland created an example that features both streaming

and shimmering motion. An eye is clearly visible in the centre of the design, and a face becomes visible if you view the illusion from across the room or shake your head.

The hidden face is a portrait of wade's wife, Christine, and the title Chryustine is a reference to the chrysanthemum shape.

Circles of Color: British artist peter Sedgley was Riley's partner for a decade and an important figure in the op art world. His paintings explore the optical interactions of concentric colored circles, which echo the geometry of the human eye and seem to pulsate on the black background, sedgley airbrushed bands of color create soft, overlapping rings in this 1968 work, YOU.

The Ouchi Illusion: This illusion is by Japanese OP artist Hajime Ouchi. More your head back and Forth as you let your eyes wander around the image and see how the circle and its background appear to shift independently of each other vision scientist Luther Spillmann of the University of Freiburg in Germanys stumbled on the illusion while brewing Ouchi's book Japanese optical and Geometrical Art, which was first published in 1973. Sillmann then introduce of the Ouchi Illusion to the vision sciences community, where it has enjoyed immense popularity.

Homage to Ouchi: This illusion (Right) it is a contemporary variation on the Ouchi Pattern, drawn by Kitaoka in 2001.

The Rotating-tilted - Lines Illusion: An illusion (Right) developed by vision scientists simone Goriand Kau Hamburger, then at the University of Freiburg in Germany is a novel variation of both the enigma effect and Riley's Blaze. To best observe the illusion, move your head closer and then further away from the page. As you approach the image, notice that the Radial lines appear to rotate counterclockwise. As you move away from the image, they appear to rotate clockwise. This illusion was featured in the first edition of the Best illusion of the year contest, held in 2005 in Spain illusion contest.

Vertigo Variant: Artist Miwa Miwa's variant of the rotating - titled - lines illusion (above) pays homage to vertigo, the classi c1958 film by Aifred Hitchcock (Left).

Christmas Lights Illusion: The Christmas Lights illusion by Italian artist and author Gianni A. Sarcone is also based on Leviant's Enigma. Notice the appearance of a flowing motion along the green-yellow stripes.

Two in One: Gori and Hamburger's combination of the rotating - tilted - lines illusion and the enigma illusion is both visually arresting and a powerful demonstration of illusory motion from a static pattern. The enigma illusion, almost three decades after its creation by Leviant, continuous to inspire visual science as well as visual arts.

Studies Related To- POP ART

Just what is it that makes Today's Homes so Different, so Appealing ? (1956).
Artist: Richard Hamilton
Hamilton's 1956 College was a seminal piece for the evaluation of POP art and is often citred as the very first work of POP art. Created for the exhibition. This is tomorrow at London's White chapel gallery in 1956, Hamilton's image was used both in the catalogue for the exhibition and on posters advertising it. The college presents viewers with an updated Adam and Eve (a body-builder

and a burlesque dancer) surrounded by all the conveniences modern life provided, including a vacuum cleaner, canned ham, and television. constructed using a variety of cutouts from magazine advertisements. Hamilton created a domestic interior scene that both lauded consumerism and citigurd the decadence that magazine advertisements. Hamilton created a domestic interior scene that both lauded consumerism and critiqued the decadence that was emblematic of the American. Post-war economic boom years.

President Elect (1960 - 61)
Artist: James Rosenquist.
Like many POP artists, Rosenquist was fascinated by the popularization of political and cultural figures in mass media. In his painting Present Elect, the artist depicts John F. Kennedy's Face amidst-an amalgamation of consumer items, Including a yellow Chevrolet and a piece of cake, Rosenquist created a collage with the three elements cut from their original mass media context, and then photo-realistically recreated them on a monumental scale. As Rosenquist explains "The face was from Kennedy's campaign poster. I was very interested at that time in people who advertised themselves, why did they put up an advertisement or themselves? So that was his face. And his promise was half a Chevrolet and a piece of stale cake. The large scale work exemplifies Rosenquists technique of combining discrete images through techniques of blending, Interlocking and Juxtaposition, as well as his skill at including political and social commentary using popular imagery.

Pastry Case I (1961-62)
Artist : Claes Oldenburg.
Artwork - Description & Analysis.
Oldenburg is known as one of the few American POP art sculptors, notorious for his playfully absurd creations of good and inanimate objects. The collection of works in Pastry case, He were originally displayed in the artists famous 1961 installation titled The store, located on New York's lower east side. In addition to Replicating consumer items, Oldenburg organized his installation like a typical variety shop and sold his items at low prices.

Commencing on the interrelation between art objects and commodities. Although sold as if they were mass-produced, the sculptures in The Store were carefully hand-built and the lavish, expressive brushstrokes that cover the items in Pastry case, I seem to mock the seriousness of Abstract expressionism, a common theme in POP art. Oldenburg combines the evocative expressionist gesture with the commodity item in a highly ironic environment.

BLAM (1962)
Artist: Roy Lichtenstein
Artwork description & Analysis:
Lichtenstein took the image used from BLAM from a 1962 edition of the comic book All American Men of War (#89) by Russ Heath. Lichtenstein's painting is not quite an exact Replica of Heath's image, but it would be easy to confuse the two upon first glance, as Lichtenstein altered the image only very subtly. One of his many paintings that appropriate subject matter from popular comics, Lichtenstein defined his carrier by experimenting with the boundaries between high and low art, which raised such questions about the nature of culture and originality without providing any definitive answers. As with the rest of POP art, it is unclear whether Lichtenstein is applauding the comic book image and the general cultural sphere to which it belongs or critiquing it, leaving interpretation up to the viewer.

BLAM and similar works were painted using the Ben-Day dot technique, borrowed from comic book printing. Thus, not only is the larger image itself a Reproduction, but it was also painted using a repetitive, almost mechanical technique.

Campbell's Soup Can (1962)
Artist : Andy Warhol
Artwork Description & Analysis :
Warhol's iconic series or Campbell's soup cans paintings were never meant to be celebrated for their form or compositional style, like that of the abstractionists, what made these works significant was Warhol's co-opting of universally recognizable imagery, such as a Campbell's soup can, Mickery mouse, or the face of Marilyn Monroe, and depicting it a mass-produced item, but within a fine art context. In that sense, Warhol wasn't Just emphasizing popular imagery, but rather providing commentary on how people have come to perceive these things in modern times : as commodities to be bought and sold, identifiable as such with one glance. This early series was hand-painted, but Warhol sweetened to screen-printing shortly afterwards, favoring the mechanical technique for his mass culture imagery. 100 Canvases of Campbell's soup cans made up his first solo exhibition at the ferus Gallery in Los Angles, and put Warhol on the art world map almost immediately, forever changing the face and content of modern art.

Standard Station (1966)
Artist : Ed Ruscha
Artwork Description and Analysis :
The printmaker, painter and photographer Ed Ruscha was an important proponent of West Coast pop art that blended the imagery of Hollywood with colorful renderings of commercial culture and the landscape of the southwest. The gasoline station is one of Ruscha's most iconic motifs, appearing repeatedly in his book Twenty Six Gasoline Stations (1963), a documentation of deadpan photographs from a Road trip through the American Southwestern Countryside. In standard station, the artist transforms the banal image of the gasoline station into an emblematic symbol of American consumer culture. Here, through the mediums of screen printing. Ruscha flattens the perspective into a single plane to create an image that evokes the aesthetic of commercial advertising. The work also demonstrates Ruscha's early forays into experiments with language and textual interplay, which would be a principal concern in much of his later, more conceptually.

A Bigger Splash (1967)
Artist : David Hockney
This large canvas measures approximately 94 by 94 inches, derived from a photograph of a swimming pool. Hockney had seen in a pool manual. Hockney was intrigued by the idea that a painting might Recapture a fleeting event frozen in photograph. As he has : "I loved the idea of painting this thing that lasts for two seconds", it takes me two weeks to paint this event that lasts for two seconds". The dynamism of the splash contrasts strongly with the static and rigid geometry of the house, the pool edge, the palm trees and the striking yellow diving board, all carefully arranged in a grid containing the splash. This gives the paintings a disjoined effect that is absolutely international, one of the hammmarks of Hockney's style. The effect of stylizations and artifiality draws on the aesthetic vocabulary of pop art.

Methodology

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Operational Definition

T-shirt (or tee shirt, or tee) is a style of abric shirt, named after the T shape of the body and Sleeves. It is normally associated with short sleeves, a round neck line known as a crew neck,
with no collar.

Op art- also known as optical art, is a style of visual art that uses optical illusions op art works are abstract, with many better known pieces created in black and white.

Pop art- Art that uses elements of popular culture, such as magazines, movies, popular music, and even bottles' and cans.

The sample

To check the acceptance of the product i have targeted teenagers from age group 18-22, I have targeted college going students from Karvenagar and Shivajaingar area, to check the acceptance of the product. I approach them personally asking their liking through 100 Questionnaire form.

Experimental work

1 Original motifs were modified through changing color combinations out line etc.
2 The best 10 designs with innovative patterns with color combinations were approved.
3 Designs were developed, which had different from the regular apart and pop art.
- Data Collection.

1 Questionnaire was used to check the acceptance of the product.

4 Percentage and Rankings
Above research Methodology Required statical analysis along with ranking for the desire finding

5 Further recommendations.
- Variations in color combinations can be change into yellow, red, blue, green etc.
- Pop and Op Art be used on Upholstery
- Printing technology can be developed using various techniques

Limitations

- Black color creates more illusion with compare other colors
- As it is use for hypnotism it can be rairly used on kids wear
- Hand painting has its limitations on fabrics
- Bold pop art and op art cannot be used on formal wear

Data Interpretation

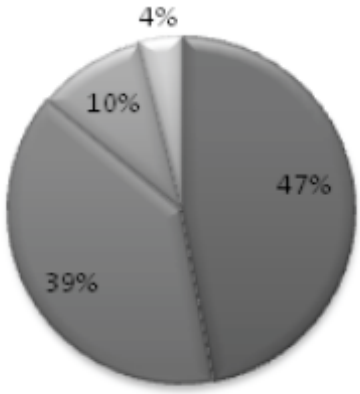
4.1Preference and responding

As conducted the research on "To study the op art and pop art and to develop the unique design on kurties and T-Shirts with the Technique of Hand painting" The survey resulted.

4.1.1 Distributions of likings of wearing op art and pop art on T-Shirts and kurties.

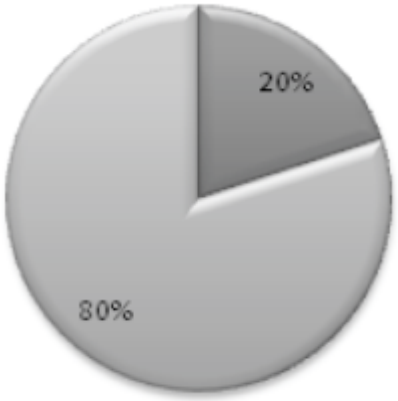
According to the survey 100% of the samples preferred the op art and pop

4.1.2 Amount to be spend on casual wear.



47% of samples were ready to spend Rs. 300 to 400 on casual wear.
39% of sample would like to spend Rs. 400 on 500 on casual wear.
10% of sample spends Rs. 500 to 600 on casual wear.
And last but not in the list, lowest majority i.e. 4% of the sample spends Rs. 600 and above on their casual wear.

4.1.3 Distribution of product availability in market.



80% of sample have not seen this product before in the market were 20% of samples seen this product before in the market.

4.1.4 Rankings for op art.

Design Number	Ranks
1	1
3	2
2	3

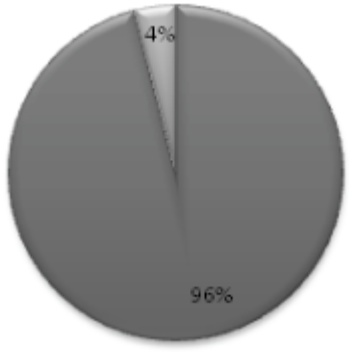
Majority of samples like the line form design with different face preferred as rank I, the design with small and big size checks preferred as Rank II, By the samples, A kurti with peter pan collar got III Rank

Ranking for pop art

Design Number	Ranks
1	1
2	2
3	3

Majority of samples ranked I for the coke can design, a lady colored with neon shades rank II by samples, and the design with half face of girl got III Rank.

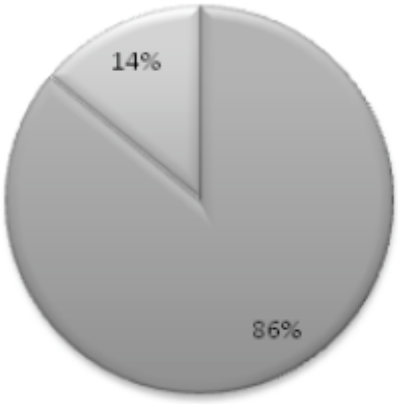
4.1.5 Distribution of products purchasing criteria



96% of samples would agree to purchase

this product at Rs. 350/- were 4% of samples disagree to purchase this product at Rs. 350/-

4.1.6 Distribution of preference of product category.



86% of sample would like to wear this product as a casually wear, were 14% of samples ready to wear this product as a party weary.

Conclusion

Inspired from the famous paintings of op art and pop art have conducted a research on "To study the op art and pop art and to develop the unique designs on kurties and T-Shirts with the Technique of hand painting The painting" Include the techniques of hand painting on western kurties and T-Shirts for an creative look. As new patterns and designs on kurites and T-Shirts more preferred by college going students. Research was targeted for the teenagers form age group 18-22 I approached them personally, asking their likings and acceptance about the product through questionnaire. And according to the survey 100% of students like the op art and por art paintings on the garments. 80% of students have not seen this product before in the market were as 20% of students have seen this products before in the market. op art design with wavy line from got I rank and design with small and big size checks got II Rank. Western kurti pattern with peter pan collar got III Rank. For the pop art T-Shirt pattern has coke can painting got I Rank, A beautiful leady colored in neon shades got II Rank, Calligraphy design on T-Shirt got III rank. Majority of samples spends Rs300 - Rs400 on theirs casual wear and the lowest majority of samples spends Rs600 and above on casual wear. The distribution of production purchasing is widely samples would agree to purchase this product at Rs. 350/- were 4% of students disagree to purchase this product Rs. 350/-

The highest sample like to wear this product casually wear were lowest samples are ready to wear this product party wear.

This Research has fulfill may aim as the product is like and accepted by most of the teenagers, also would be in trend in future.

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SURYADATTA

A Study of Ethnic Fabric by Designing Western Silhouette for Pre-school Girls

Utkarsha Satkar

Abstract

Ethnic wear are always in trend since past decades in adult, but now such trend is also observed in kids. This project had been undertaken to study the ethnic fabric by designing western silhouette for preschool girls. Innovation patterns are designed using a line silhouette and ethnic fabric such as cotton silk and brocade are used. 30 designs were designed and 10 designs were selected among them, to check the acceptance of the products, questionnaire was developed. 100 samples were selected purposively from Kothrud, area. Ranks were given for the best 3 designs. Majority of samples agreed to wear the product on festivals.

Introduction

Historical Background

Preschool education is education that focuses on educating children from the ages of infancy until six years old. The system of preschool education varies widely, with different approaches, theories, and practices within different school jurisdictions. The term preschool education includes such programs as nursery school, day care, or kindergarten, which are occasionally used interchangeably. Preschool education, thus, is a vital component of the development of many young people. Early childhood education (ECE) is a pedagogical approach covering the education of children from the period from birth to six years of age.

- Physical development - Concerning the physical growth and the development of both gross (such as walking) and fine motor (such as finger movement) control of the body.
- Perception and sensory development - How a child functions using the senses and the ability to process the information gained.
- Communication and language development - Using visual and sound stimuli, especially in the acquisition of language, also in the exchange of thoughts and feelings.
- Cognitive development - Concerning how the individual thinks and react.
- Emotional Development - Concerning children's increasing awareness and control of their feelings and how does he react to these feelings in a given situation.

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- Social Development - Concerning the child's identity, their relationship with others, and understanding their place within a social environment.

Day care: Day care or child care is care of a child during the day by a person other than the child's parents or legal guardians, typically someone outside the child's immediate family.

Nursery School: A nursery school is a school for children between the ages of three and five, Nursery school is meant to develop children through planned programs, rather than simply caring for the child in a daycare environment.

- Emotional, Personal and Social Development
- Communication and Language,
- Knowledge and Understanding of the World,
- Expressive and Aesthetic Development,
- Physical Development and Movement

Kindergarten: In German Kindergarten means "children's garden" is a form of education for young children. Children are taught to develop basic skills through creative play and social interaction.

History of textile

The term 'Textile' is a Latin word originating from the word 'texere' means 'to weave'. Textile refers to a flexible material comprising of natural or artificial fibers, known as yarn. Textiles are formed by weaving, knitting, crocheting, knotting and pressing fibers together. Indian textile enjoys a rich heritage and the origin of textiles in India traces back to the Indus valley Civilization where people used homespun cotton for weaving their clothes. Though India was famous even in ancient times as an exporter of textiles to most parts of the civilized world.

Few handlooms from India: Madras checks from Tamil Nadu, ikats from Andhra Pradesh and Orissa, tie and dye from Gujarat and Rajasthan, brocades from Banaras, jacquards form Uttar Pradesh, Daccai from West Bengal and phulkari from Punjab.

Children fashion: Girls wore dresses of knee length, with trimmings at the hem such as lace and embroidery similar to women's lingerie dresses. Normally, black shoes or button up / lace up boots and woolen stockings went with the dress as well as kidskin or crochet gloves. A new attempt was made to design garments that are more suitable for playing by designing girls' dresses with short sleeves. Kid leather gloves would have been worn to cover the hands or lace gloves in the summer.

1.1 Objectives of the study:

- To study traditional fabrics with western silhouette.
- To study history of traditional fabric and its significance.
- To study traditional fabrics, color combination and western silhouette.

1.2 Scope of the study:

- In urban areas, western clothing is common and uniformly worn by people of all style.
- Different types of silhouette can be used.
- Age group can be teenage too.

Review of Literature

2.1 Studies related to Ethnic fabrics:

Ethnic fashion By Cindi Pearce Published by: Catalogs.com Ethnic fashion is that which embraces and represents a culture

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and allows one to celebrate her heritage and origin. Ethnicity is the traditional culture of a social group. When you dress to reflect your ethnicity, you are celebrating who you are and expressing your cultural roots. Every region in the world has its own distinctive identity in the form of its ethnicity. Like in native America clothing often features bead work designs as well as gloriously pretty shawls that can be worn as an evening wrap or as a dance shawl or apron, which was the original purpose of this item. It also shows likeliness for whereas in afro-centric regions one will find liberal use of colors and patterns are incorporated into the dashikis, caftans and mud cloth prints, which reflect their cultures. Afro-centric clothing are often termed for comfort for your leisure time when one just want to kick back and Ethnic fashion or fabric can transform ones look in no time from a 9 to 7 working person to say a prince or a princess or just form one particular regional person to Ethnic fashion is a celebration of one's origins, beliefs and customs. Embrace it.

Designer drapes world in colors of Meghalaya IANS | Jul 1, 2015, 12.00 AM IST Published by: The times of India life and style. Fabrics of Meghalaya have been one of a kind in the history of Indian textiles but being in situated in the north east India and less exposure has always kept its valuable craft out of reach of the world. For the Meghalaya localities the traditional fabrics are not just cloths but it's the preservation of a way of life and their culture. The natural fabrics of this region - Eri silk and muga - are hand-woven mostly in traditional loin looms. The Eri silk worms, which produce the famous Assam silk, are known in Meghalaya's Khasi-Jaintia Hills as Niang Ryndia. The silk is cultured to weave the trademark Ryndia shawls. Muga, “the golden fiber” is produced only in Assam and it has also tremendous export potentiality. Such activities are intimately linked with the culture and tradition of the Assamese people since long past. Muga silk is quite unique and also second costliest silk in the world after Pashmina. It has a natural shining color. With the quality of stain free fabric. The golden color increases with every wash instead of decaying. It can also absorb ultra violet rays by 85%. It has the highest tensile amongst all the natural fabrics. "The making of these heritage fabrics has been passed down from generation to generation of weavers.

Popular Fabrics in Indian Ethnic Wear by Hemant Jain on April 16, 2015 published by: Sooper article Indian ethnic wear is fast gaining popularity across the globe. There is a tremendous variety of choices available for both men and women. This includes traditional designs and styles from specific regions that have now become famous around the world. You also have modern and indo western styles in this context. They seek to combine the best aspects of western and Indian fashion. Naturally, there are a lot of fabrics that are used to make ethnic clothing,. You can differentiate them not only on the basis of the raw materials used but also on the basis of how they are woven and embroidered. That being said, there are certain fabrics that have proved more popular than others. While browsing Indian dresses online, you will find that these are the options that appear most often. These include a mix of traditional, ethnic fabrics and modern, western fabrics. To name few of the ethnic fabric are Silk, Cotton, Georgette and Chiffon, Indigenous Fabrics Besides the above mentioned textiles, there are many interesting fabrics that are used to make Indian outfits. For instance, cotton and silk blends are extremely popular with regional weavers and artisans, while high

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end designers often use rich fabrics like velvet, lace and satin in place of the traditional silks. There is indeed a dazzling range of choices available that makes shopping for ethnic clothing a very exciting and satisfying experience.

The Fabric of India by Louise Levathes April 9, 2009. Published by: Travel and Leisure Resplendent, intricate, and varied, India's textile tradition is a kaleidoscope of colors and cultures where "Each of India's 28 states—and many of the villages within those states—has its own distinct designs, its own textile language,"
The length and the breath of India has something or the other to offer in terms of fabric, design, craft etc. for example let's start from Kashmir which has this beautiful woolen shawls name Pashmina to offer the world. The delicate, intricate needlework of the scarf echoes the flowery speech and complexity of the Kashmiri people.
Moving down to west of India there is this beautiful state called Gujarat highly rich in its culture and ethnic wear with bold and high contrast patterns that stand out from the harsh landscape of Gujarat. Here embroidery and beadwork flourish as means of making a living and are the world's richest areas for folk embroidery. Gujarat is also center for bandhani, or tie-dye work. Bandhani shawls are part of the common dress of western Indian women. It is used in various ways to create ethnic and western elegant piece of outfits across the globe. Here in dirt of Rann of Kutch, north of bhuj has best craftsmanship to offer in embroidery with the stitches remarkably small and complex, created with tiny needles in an open chain stitch, also characteristic of the Sind. The patterns are abstract and geometric and done in vibrant colors—red, green, blue, yellow, orange, pink, and black. They are similar to the embroidery of Afghanistan.

Moving to the very south of India were southern Indians have the reputation of being more reserved and religious than their northern countrymen have completely different array of fabric and design. It is the heart for one of the oldest and richest fabric, "SILK" and its use for making highest quality Indian ethnic wear called "Sari" which is made in the Place name Kanchipuram, one of the most sacred cities in India, Kanchipuram is a household word for the most desired silk wedding saris in India as well as cottons in brilliant checks and plaids. Typically, Kanchipuram saris have patterns of brightly contrasting colors—maroon and green, peacock blue and pink—and gold or silver thread woven into the borders. "Often, Kanchipuram silk is considered superior because each thread is composed of six fine twists of silk instead of three, The added weight of the silk is said to make it fall gracefully over a woman's body, creating curves where there should be and hiding others.

In contrast, eastern India is lush and full of color, and, the women there favor simple white saris with a gold or red border. Dazzling gold brocade from Benares and Delicate white-on-white embroidery speaks of the urban sophistication of Lucknow.
India feels, to me, like a collection of countries reflected in its textiles.

2.2 Studies related to preschool:

Young and Trendy – Kids Fashion Is Here To Stay By: Sweta Kumari Published by: Fiber to fashion.com the world of fashion is taking a new generation by storm. And this generation is young, small and tender. Kids fashion is becoming big, getting all the attention

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from designers, companies and well yes the parents. And expectedly the trend first started in Hollywood with the personified celeb kids like Suri Cruise, daughter of Tom Cruise and Katie Holmes, Zahara Jolie-Pitt is another on the list. She is as much a style icon as her celebrity parents Angelina Jolie and Brad Pitt, Carefree look of Violet Affleck, daughter of celebrity parents- Ben Affleck and Jennifer Garner, is a craze in so called kids fashion, Ditto, for the celebrity stylist Rachel Zoes son Skyler who is an epitome of fashion, with his signature style hats. They all are splurging millions of dollars on their kids' fashion turning this into one of the fastest growing segments in the fashion industry. Today's mums are happy to splurge extortionate amount of money keeping their kids stylish, chic to the detriment of their own style. This weakness has been well realized by the fashion retailers that today's kids are promising consumer and with the nuclear families with both the parents working there is enough income to spend on the fashion for the kids Realizing the potential, designers, fashion brands and retailers are looking at this segment closely and have highly created the luxurious clothing line be it for toddler, preschooler or school going kids.

Kid's fashion has given them options and exposed them to changing trends; It has given them new confidence not only about good appearance and attractive persona but also helped them in inculcating positive attitude - by helping them in creating their own individual look and their own unique style statement. Latest trends, gorgeous, dazzling kiddie's couture and the endless accessories.

Kids fashion is a Fad and classic both - it's a long lasting craze, as in modern day parents want their kids to fit in, they want them to look like their friend's and other kid's of their own age and dream to become not only fashion followers but fashion leaders in their own way.

The entire mini-me-lines are divided in subcategories as per age into:

- Infant clothing - age: 3, 6, 12, 18, 24 months
- Toddlers clothing - age of two to eight
- Children clothing age seven to twelve

Preschool back to school style, August 12, 2015 by McKenzie published by: Girllovesglam.com Reading the article I thought having a child who is old enough to be in preschool is not an easy job in ever growing competitive world and equally growing fashion sense in common public and the way of judging on the basis of one's dressing style. Parents want their child to feel prepared and feel confident about starting their journey as a student. I think a major part about feeling confident as a student, is how you feel in your wardrobe. This doesn't mean your kids need to be in designer clothing, but I do believe that if you feel good in your clothing, you act more confidently. That's why I suggest to hit some good stores to get some pieces that will transition nicely from season to season and can be worn to preschool and to play in. For starters let's talk about shoes, Shoes are a major part of any outfit but when it comes to a preschooler, shoes are about more than just looking great. They should be properly fitted, buckled, strapped so that the child is comfortable in doing every possible activity be it in school or on a playground. Now talking about dresses I personally feel parents should go for outfits that can be layered with different piece of dress. For instance say u buy a skirt and a spaghetti top for a summer u can always add a jacket and a legging underneath the skirt in winter which will create a new look for your little

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fashionista and is also a good transition and It also helps save a little money too because you don't have to buy so many clothes! Well this was my little opinion and understanding through this article for the parents of the cute little preschooler fashionista's.

Bloom time for kids fashion Melissa Heng, Thursday March 24, 2016. Published by: The Straits Times Magazine The children's clothing market has become the one bright spot in the weak retail sector, thanks to the indulgent parents and the need to keep their children fashionable and presentable. Parents are becoming more trend-conscious when it comes to dressing up their children and this has helped spur the children wear industry. That is why we can see wide array of clothing and prices in famous fashion labels for children's. The expansion in children's labels is also mirrored in the luxury end of the market where famous labels like Dolce & Gabbana, Club 21, Armani, Bonpoint, Dior, Ralph Lauren has come up with children's label. Retail experts say growing affluence and smaller families have led to the strong growth in the children's wear market. With fewer children a household, parents or even relatives are willing to spend more on the kids. With generally higher disposable incomes and more affluent dual-income families, design, look and quality of clothes are prioritized over price.

Today's parents have higher incomes compared with those of previous generations and are more willing to spend on their children.

"While parents and grandparents may have grown up with a culture of saving as much as possible and have grown used to spending less on themselves, they may now feel that they could be a bit freer spending on their children and grandchildren,"
This also have a parallel aspect that children's outgrow their dresses and as a result parents have to buy new cloths.
At the end whatever the reason children's fashion industry is a one of the most fast growing because of the above explained thinking and need of parents.

2.3 Studies related to western silhouette:

The shaping of women's bodies: in pursuit of the fashion silhouette Written by: Carel. Dated: 13th may 2014. Published by: James Cook University The Western fashion silhouette has never been static, with hemlines and necklines morphing in and out and up and down over at least the past five hundred years. Unlike the ancient Greeks and Roman's people are not emphasizing on enhancing or flowing with the natural contours of the body, rather they shape the body to create what is considered as the silhouette of the current time. At various times it is required to design and develop different type of dress or device to achieve perfect silhouette for various parts of body. For example undergarments which are created to enhance or conceal the part of the body are the handmaiden of the fashion and this has created a parallel industry. While this industry is still important, people are to completely reliable on it as there has been lot of alternatives developed in the market, as for people go for less direct methods such as gym, diet or cosmetic surgery. Let's say bust enhance is no longer depended solely on padded bra as there is a permanent option of breast implant. A corset can be replaced by the medical procedure of tummy tucks and so on. Well history of fashion has seen lot of changes in silhouette in every era and still

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continues to change.

Methodology

3.1: Operational definition

Ethnic fabric: Ethnic fabric is a kind of traditional fabric of particular country. Similarly it is the identity of the country.
Preschool: Relating to the time before a child is old enough to go to school.
Western silhouette: It is a category of men's and women's clothing which derives its unique style from the clothes worn.

3.2: The sample

Purposive sampling method. Approached 100 samples personally and conducted a survey to know the views and acceptance of the product in kothrud area. Have targeted Middle class samples (only mothers of pre-school girls from age 4 to 6 yrs only).

3.3: Experimental work

3.3.1: Modification of design: Have modified and created new patterns considering 'A- Line' silhouette and Ethnic fabric.
3.3.2: Aproval of designs: Among 30 designs,10 designs were approved for final products.
3.3.3: Development of patterns: Using 'A-Line' silhouettes and 2 main fabrics (i.e) cotton silk and brocade have made 10 products.

3.4: Data collection

3.4.1: Tools: Research required a survey method in kothrud area, through questionnaire by approaching personally to the samples, by displaying 10 ready products in front of them, to check the acceptance by the samples.

3.4.2: Percentage and ranking: Above research methodology required statical analysis along with ranking for the desired finding.

3.5: Further recommendation:

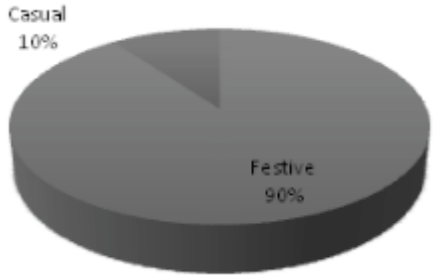
Present colour combination can further change into pure ethnic colour combination. Present silhouette (A-Line)can be change into Balloon or Empire waist silhouette. Using Ethnic fabric western dresses can be made into one piece or gowns etc.

Limitation of the study:

- Traditional fabrics have limitation as it cannot be used for innerwear.
- Among different fabrics selective fabrics are used for this project. (eg.) Cotton silk and Brocade.
- Among different fabrics selective fabrics are used for this project. (eg.) Cotton silk and Brocade.
- Age group 4 yrs to 6 yrs.

Data Interpretation

4.1: Preference of resonance
4.1.1: Distribution of preferences of usage of product
A: Festive – 90% B: Casual – 10%



According to the survey 90% of samples preferred the products for festive use

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4.1.2: Distribution of spending amount on ethnic wear

A: Rs. 200 – Rs 400 – 2%
B: Rs. 400 – Rs. 600 – 30%
C: Rs. 600 – Rs. 800 – 45%
D: Rs. 800 and above.- 23%

45% samples would like to spend Rs. 600 – Rs.800 and 23%are able to spend Rs. 800 and above, but remaining 32% preferred buying in between Rs. 200 – Rs. 600 on the product.

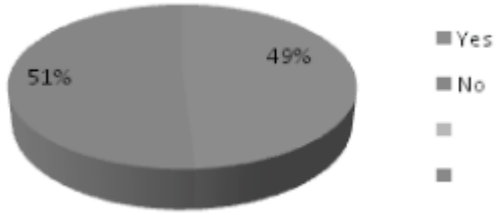
4.1.3: Analyzing the ranking of the product

Design No.	Ranking
10	1
8	2
2	3

Majority of samples liked design no. 10 and preferred most demanding design. Design no. 8 was on 2nd rank and design no. 2 got 3rd rank.

4.1.4: Distribution availability in the market

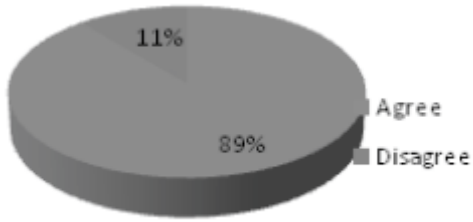
A: yes – 49% B: No – 51%



51% samples have not seen such products before and found it new and innovative; but at the same time 49%samples have seen such product before in the market.

4.1.5: Distribution of acceptance of the product

A: Agree B: Disagree



89% of samples would like to buy the product at Rs 550 and remaining 11%samples would disagree.

4.1.6: Distribution about the product

Mostly all the samples appreciated the work done and liked the colour combination, patterns of the product

Conclusion

Inspired from the Ethnic fabric of india and have conducted research on"To study Ethnic fabric by designing western silhouette for preschool girls".The fabric

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include cotton silk and brocade using 'A-Line' silhouette, have designed western cuts and have targeted age group from 4yrs to 6 yrs. Approached samples personally asking their views about the acceptance of the product through questionnaire. According to the survey 90%of the samples wolud like to prefer the product as festive wear.45% would like to spend Rs. 600- Rs 800 on the product. Design No. 10, 8 and 2 were prefered most demanding designs.51% samples have not seen such products before and found it new and innovative and loved the color combination. Among 100 samples 89% of them agreed to buy the product at Rs 550.Mostly all the samples appreciated the work done and liked the patterns and fabric used for the product as it is more comfortable for kids. This research has fullfilled my aim as the product is liked and accepted by most of the samples.

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SURYADATTA

Impact of Visual Effect in Fashion World

Siddhant Wadmare

Abstract

Visual effects involve the integration of generated imagery to create environments which look realistic. Designers conduct research on fashion trends and interpret them for their audience". They attempt to design clothes which are functional as well as aesthetically pleasing. They consider who is likely to wear a garment and the situations in which it will be worn. They have a wide range and combinations of materials to work with and a wide range of colors, patterns and styles to choose from. Though most clothing worn for everyday wear falls within a narrow range of conventional styles, unusual garments are usually sought for special occasions such as evening wear or party dresses. Such imaginary effects can be generated using Visual effects.

This paper represents use of Visual effects in Fashion Design for creating such Designs. In this paper researcher has mention the use and effects of Visual effects in fashion design for implementing Optical illusion formats come into existence due to factors such as brightness, contrast, motion, geometry and perspective, interpretation of three-dimensional images, cognitive status and color.

The design of geometric form is widely used in daily life, such as Product Design, Communication Design and Digital Animation. This study discusses the relationship between the features of geometric form and clothing patterns. Through the works of fashion designers analyze the techniques used and the possibility of development. In order to break the traditional concepts of pattern making and to dismantle the patterns, the geometric form was used as the basic structure to create a three-dimensional silhouette. As a result, the clothing would produce visual effects with the movement of body. Further, researcher proposes the concept of digital designing through visual effects.

Key Words Visual Effect, Optical illusion.

Introduction

The concept of Fashion Design started from 19th century, with Charles Frederick who is supposed to be known as 1st Designer to have his label sewn into the garments. He has started Maison Counter (Fashion house) in Paris.

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Significantly success was such that he was able to dictate to his customers what they should wear, this has lead to instead of following their lead as earlier dressmakers had done. So the concept of innovation in dress designing has started. Visual effects play in important role in the Fashion World. Later on Models started using Visual effects works because the work is completed during post-production. Visual effects primarily executed in Post-Production with the use of multiple tools and technologies such as graphic design, modeling, animation.

There are Four Different categories of Visual effects:

A. In Matte Panting

B. In Simulation

C. Digital Animation

D. Digital Composition

A. In Matte Panting concepts like, Matte paintings and stills: digital or traditional paintings or photographs Garments Design.

B. In Simulations concepts Live-action effects: keying actors, blue and green screening.

C. Digital animation: modeling, computer graphics lighting, texturing, rigging, animating, and rendering computer-generated 3D characters, particle effects, digital sets, backgrounds.

D. In Digital Composition Digital effects Digital effects often involve the integration of still photography and computer-generated imagery (CGI) to create environments which look realistic, but would be dangerous, costly, or impossible to capture in camera. FX is usually associated with the still photography world in contrast to visual effects which is associated with motion film production.

Types of Fashion

Haute couture in early Days fashion clothing was predominately designed and manufactured on a made-to-measure or haute couture basis, with each garment being created for a specific client. A couture garment is made to order for an individual customer, and is usually made from high-quality, expensive fabric, sewn with extreme attention to detail and finish, often using time-consuming, hand-executed techniques. Look and fit take priority over the cost of materials and the time it takes to make. Due to the high cost of each garment, haute couture makes little direct profit for the fashion houses, but is important for prestige and publicity.

A. Ready-to-wear (pret-a-porter) Ready-to-wear clothes are a cross between haute couture and mass market. They are not made for individual customers, but great care is taken in the choice and cut of the fabric. Clothes are made in small quantities to guarantee exclusivity, so they are rather expensive.

B. Mass market currently the fashion industry relies more on mass market sales. The mass market caters for a wide range of customers, producing ready-to-wear garments using trends set by the famous names in fashion. They often wait around a season to make sure a style is going to catch on before producing their own versions of the original look. In order to save money and time, they use cheaper fabrics and simpler production techniques which can easily be done by machine. The end product can therefore be sold much more cheaply.

C. Digital visual effects Hundreds of computer animators, model makers, explosives experts, puppeteers and make-up artists spend thousands of hours crafting. When we think of modern special effects, we tend to focus on **computer generated,** effects.

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Computers have had a greater impact on special effects than any other tool. Like precise miniatures, creative makeup and good old-fashioned dynamite. Most often, however, good special effects are a blend of both physical techniques and digital wizardry. Computer animators might create a digital Tyrannosaurus Rex that races through a forest. Pyrotechnics experts set up controlled explosions that splinter tree trunks and branches as the digital creature crushes through them.
When it's time for the beast to grab the hero in his teeth, the animatronics team creates a giant mechanical puppet of the T-Rex's head. After the T-Rex has had his snack, the makeup artists paint a gruesome wound on the hero (he lives, of course).

Effects of Visual Effects on Fashion Design Do & Don'ts

Visual communication involves the use of visual elements, such as drawings, illustrations and electronic images, to convey ideas and information to an audience & to the Model also.
Before presentation, Model prefer to see how a Garments Look like or fit to herself and thus a potential downside of visual communication.

Advantages of Visual Communication

Most of the business organizations are using visual techniques to present the information. It is becoming very popular day by day. Visual presentation is beneficial for many reasons. Some of them are as follows:

1. **Effective for Illiterate Receiver:** If the receivers are illiterate, the visual communication will be more effective to exchange information. They can easily understand the information that is presented visually.

2. **Helps in Oral Communication:** Visual techniques can be used with oral communication. Oral communication becomes more meaningful if graphs, pictures and diagrams are used with it.

3. **Easy Explanation:** Everyone can explain the meaning of it very easily. Easy explanation has made the visual techniques more popular.

4. **Simple presentation:** Complex information, data and figures can be easily presented very simply on graphs, pictures and diagrams.

5. **Prevents Wastage of Time:** Visual techniques help to prevent the wastage of time. Written and oral communication takes much time to exchange information. But number of receivers can be communicated at a time through visual methods.

6. **Helps in Quick Decision:** Visual communication helps to take quick decision. So management prefers visual techniques to communicate with others.

7. **Popular:** Visual communication is very much popular because people do not like much speech and long explanation rather than a chart of a diagram.

8. **Others:** Artful presentation, Ads impact to the information, quicker understanding.

Disadvantages of visual communication:

There are some limitations of visual communication as follows:

1. **Costly:** The visual methods of

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communication are more costly than those of other methods. To draw maps, charts, diagram is costly. That is why only large company or organization can use this technique.

2. **Complex Presentation:** Sometimes visual presentation of information becomes complex. The receivers cannot understand the meaning of the presentation.

3. **Incomplete Method:** This technique is considered as an incomplete method. Visual presentation is not sufficient to communicate effectively and clearly but also it can be successfully used with oral communication.

4. **Wastage of Time:** Sometimes visual techniques take much time to communicate. Whereas oral communication takes no time to exchange information.

5. **Difficult to Understand:** Difficult to understand and requires a lot of repetitions in visual communication. Since it uses gestures, facial expressions, eye contact, touch etc. for communicating with others which may not be understandable for the simple and foolish people.

6. **Problem for General Readers:** General people are not prefers to communicate through visual communication with others. Sometimes it cannot create an impression upon people or listeners. It is less influential and cannot be used everywhere.

7. **Others:** Ambiguity, situational problem, delays in taking decision.

Conclusion

In this paper an attempt has been made how the Impact of Visual Affects the Fashion World. Further, an attempt has been illustrated to give the effects Visual communication and Visual effects helps to promote Fashion World by Appling Digital Methodology by simulation Tools.

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Enhancing Tribal Livelihood Through Watershed Development

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Introduction

Socio-economic development of a country depends on the proper utilization of natural resources. Besides having a strong base of natural resources, condition of tribal areas of Madhya Pradesh is dismal. Government of Madhya Pradesh started "Rajiv Gandhi Watershed Mission" in 1994, based on the recommendations of Hanumant Rao Committee, with the objectives to reduce poverty, unemployment and maximize agriculture production (Patel 2004).

Watershed management in India started way back in 1880 with the Famine Commission Report, and then furthered by Royal Commission of Agriculture in 1928. Realising the importance of participatory management of land development and water management programmes, Ministry of Rural Development adopted the approach developed by Central Research Institute for Dry land Agriculture in 24 locations in 1984. From 1985, some NGOs joined the watershed development programme. A large scale National Watershed Development Programme for Rainfed Agriculture was launched in 1992-97 period. During the Eighth Five year Plan period an area of 4.23 million ha in about 2,554 watersheds covering 350 districts in the country was treated and developed with an expenditure of Rs. 9,679 million. In the Ninth Plan, the outlay was raised to Rs. 10,200 million to treat 2.30 million ha (Arya 2007).

A watershed is generally defined as a geo-hydrological unit or land area, the run-o0ff of which flows in defined surface drains or streams to a common drain process. The watershed approach to the development recognizes the interrelationships between soil and water, and between upstream and downstream areas in the development of water harvesting and conservation, appropriate land use, vegetative cover and other potentials of natural endowments to promote the socio- economic welfare of the people (Arya 2007).

Watershed management is an 'area development' strategy. In this strategy, the area being developed is a watershed area and the subject is soil & water conservation. Watershed management is the harmonious development and management of soil & water resources, within the natural boundaries of a watershed on the sustainable basis for the equitable benefit of the people, while delivering clean and controlled water flow down stream.

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Khaira, a forest village comes under Kusumi Tehsil of Sidhi district. The tribal village has a population of 261 tribes. The village is 15 km far from pitch road, and away 60 kms from district headquarter Sidhi in Madhya Pradesh. The area is declared under the Sanjay Dubri National Park. Since there is no road connectivity, a person has to cross 2 rivers and 6 nallahs without bridges. With the assistance of ACTIONAID, Gram Sudhar Samiti started education, health, women empowerment and other programmes. But considering the problem of the area and locally available resources, GSS volunteers came out with a conclusion that land is not productive due to excessive soil and water erosion. Water level was very low since there was no structure to harvest water, crop was dependent on rainfall. Malnutrition was usual phenomena; due to seasonal migration community didn't take care of common property resources. In summer, villagers have to bring drinking water from 3-4 kms from live rivers / nallahs. Community survived on Mahua and other forest products during slack period. Community always demanded programmes for sustained livelihood and strong literacy about their land and resources. GSS started watershed programme and now with this initiative there is 24 hours automatic flow of water throughout year through a natural outlet in village Khaira. Livelihood means through improved livestock and agriculture are available, drinking water is available and now people think of educating their children, taking care of health, sanitation and other factors towards sustainable and better human development.

The Area

Sidhi district is the eastern boundary of MP, which is surrounded by dense forests and mineral resources. It is a tribal dominated area, Gond, Pannika, Agaria, Baiga and Kol tribes are main residents. The Baiga tribe of Madhya Pradesh is declared as Agriculture is mostly based on rainwater and prime crops are paddy, jawar, pulses, gram and wheat. Sidhi district makes the North-eastern boundary of the state. Sidhi district is a repository of natural. historical and cultural history. This district is Known for luxuriant natural resources with the river Sone draining the district. On one side the spectrum of its floristic socio-cultural diversity and ethnic history of tribal, the district has a panoramic view of the Kaimur, Kehejua and Ranimunda hills blazing with flowers of flame of forest and intoxicated by the sweet smell of mahua flowers.

Population of Sidhi District

Total population	1126515
Male	577091
Female	549424
Rural	1033407
Male	528431
Female	504976

(Source: Census 2011)

Baiga as Particularly Vulnerable Tribal Groups (PVTGs)

The signifier 'tribal', is merely a product of the community's engagement with the state and external society (Kjosavik, 2006). Keeping in view the different historical and cultural experiences of a particular tribal community, their specific needs and aspirations as regards development may not fully find expression through a movement which must represent the collective interests of all tribes. In 1976 and thereafter in 1993,

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a distinction was made within the tribal community; the category of Primitive Tribal Group (PTGs) was created to include those groups that were considered poorest of the poor (UNDP 2012). According to the Indian government, Particularly Vulnerable Tribal Groups (PVTG), earlier known as PTG, are characterized by a) forest-based livelihoods, b) pre-agriculture level of existence, c) stagnant or declining population d) extremely low literacy and e) a subsistence economy (NAC, 2013). The 28 th Standing Committee on Labour Welfare, which focused on the development of the PVTGs concluded that there hasn't been much progress made on this front. In spite of special provision for PVTGs since the 5 th Five Year Plan, no state government has proposed the deletion of any group from the list (UNDP, 2012).

PVTGs are crucial to the entire development debate for two reasons. Firstly, because theirs' remains, the last resistance to the cultural, social, political and economic homogenization of social institutions from the family to the economy, which is one of the major features of development. Secondly, irrespective of whether they lose in the struggle for survival or 'succeed' in being assimilated by development, it will mean the erasure of many cultures and a setback to cultural diversity in India, and with that will also disappear any hope of we learning valuable lessons from these cultures in order to cure the sickness of our own civilization.

As per 2001census, the population of Particularly Vulnerable Tribal Groups (PVTGs) in India was 27,68,322. As the census does not focus on these groups beyond numbers, the National Advisory Council (NAC, 2013), in its recommendations for 2013 on development challenges to the PVTGs, has pointed out the lack of authentic data on the population and current habitat of these groups. The NAC defines the PVTGs as tribal communities, which stand out from other tribes who have either completely assimilated into the mainstream or are close. The PVTGs are tribes who have forest based livelihoods; pre-agriculture level of existence; a stagnant or declining population; and extremely low literacy and subsistence economy. There are 75 such groups, which live across 17 states and 1 Union Territory in India. The primary reason for the increase in the vulnerabilities of the PVTGs across the country is the loss of their customary habitat and livelihood resources, which sustained them in the past. This loss is attributed to non-recognition of their rights despite many legislative provisions such as The Scheduled Tribes and Other Forest Dwellers (Recognition of Forest Right Act, 2006, also called FRA and the Provisions of the Panchayats: Extension to the Scheduled Areas Act, 1996 (PESA). The NAC's primary recommendation is that rights to their land and habitation must be recognized and respected in order to protect these groups from their present fragile conditions, socio-economic vulnerability and diminishing population.

The Baiga is a PVTG whose home is in the different parts of Madhya Pradesh, Chhattisgarh , Uttar Pradesh and Orrissa . Baigas formerly practised only shifting cultivation, burning down patches of jungle and sowing seed on the ground fertilised by the ashes after the breaking of the rains (Russell, 1916). The distinct feature about Biagas is that they don't till the ground and consider it to be a sin to lacerate the breast of their mother earth with a ploughshare (ibid). Another possible reason which they say is that

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God has made jungle which gives them everything and also gave them wisdom to discover the things provided to them.

The Watershed development Program

The budgetary allocated 5300 crore rupees to support micro-irrigation, watershed development and the 'Pradhan Mantri Krishi Sinchai Yojana' in the union budget 2016. Around 25,000 crore rupees to be invested in 2015-16 to the corpus of Rural Infrastructure Development Fund (RIDF) set up in NABARD; 15,000 crore rupees for Long Term Rural Credit Fund; 45,000 crore rupees for Short Term Co-operative Rural Credit Refinance Fund; and 15,000 crore rupees for Short Term RRB Refinance Fund.

M.P. government started Rajiv Gandhi Watershed Mission for the watershed development in the area. Gram Sudhar Samiti (GSS), an NGO, was selected for the implementation of watershed development programme in Sidhi. It has been working in the area adopting 14 villages under the watershed development programme supported by DRDA, Sidhi.

Watershed management is an 'area development strategy'. In this strategy, the area being developed is a watershed area, and the subject is water and soil erosion. Watershed management is harmonious development and management of soil and water resources within the natural boundaries of a watershed area, on a sustainable basis, for the equitable benefit of the people, while delivering clean and controlled water flow downstream. It is also to prevent the depletion of the water table by ensuring that each year the rainwater and the ground water meet so that the rain can recharge the ground water and stabilize the water table level (Pandit 2003).

The author first visited watershed area in 1998-99 on the invitation of Gram Sudhar Samiti to plan watershed programme. GSS organized PRAs for ascertaining community, group and individual problems, assessing available resources, identifying commonly acceptable solutions and formulating time-bound action plans with their own and outside resources. To fulfill the felt needs of the community within the watershed boundary, an integrated programme of resource conservation, development and management was implemented to solve the problems of the community. These programmes included land leveling, staggered contour trenching, contour bunding, construction of loose boulder check dams and gabion structures. GSS has done demonstrative work in the promotion of agro and social forestry and pasture development, conservation of natural resources and socio-economic development of the community.

Watershed Development and Management

Watershed approach was adopted in 1987 by Government of India under the Drought Prone Area Programme, Desert Development Programme and National Watershed Development Programme in Rain fed Areas. While the focus of these programmes may have differed, the common theme amongst these programmes has been their basic objective of land and water resources management.

Scientists have developed appropriate technologies to find solutions to most of the problems relating to watershed treatment, ranging from simple check

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dams to large percolation / irrigation tanks, from vegetative barriers to contour bunds. On the other hand, the farmers and the village community have evolved their own technologies and practices based on local needs, knowledge, and cost effective materials. GSS invited scientists and experts like Magsassay awardee Rajendra Singh to give validation to the farmer's practices or improve upon their technical content without losing their comparative advantage of cost-effectiveness and simple and easy usefulness.

The work on conservation implies protection, rational management and sustainable development and utilization. Watershed conservation and its ancillary activities (plantation, soil conservation, pasture development, etc.) are being carried out by GSS since last 10 years. This programme was conceived to achieve conservation and development of watershed, through people's participation, to improve its ecological well-being and thereby enhance its productivity and life supporting systems, for the betterment of the people and their environment.

A watershed area is a geo-hydrological unit or piece of land that drains at a common point. Watershed areas are considered as the basic unit for planning and development. In this approach, developmental work starts from the highest point in the area, and progresses downwards to the natural stream or lowest point. The watershed approach is a project based, ridge to valley approach for in situ soil and water conservation etc. Unit of development of watershed area was about 500 ha each in watershed development projects. However, the actual area of project may vary keeping in view the geographical location. The size of village etc. the thematic maps generated from satellite data for different themes such as land use / land cover, hydro geo-morphology, soils etc. helped for selection of a watershed area.

The natural resources that constitute the basic wealth of India are fast getting decimated. These include non-renewable minerals, other economic deposits and fossil fuels. Even the stress on the renewable life supporting land-water-biomass system is fast exceeding the limits of resilience. This situation has been a result of improper land use. This has not been due to efforts to provide the hundreds of millions of toilers with their minimum needs. It is, in fact, part of a diabolical short-term strategy to meet the insatiable greed of the organized sectors (Sinha 1997)

GSS believes that the farmer and producer (in the village) not only have a deep understanding of past traditions but also the capacity to respond to changes. But changes do not have to be forced or induced artificially. Arun Tyagi, President, GSS clarified it with an example. Water being the source of life, the villager knows best how to conserve water; and depending upon the geographic contours of each locale, the villager knows also how to improve the moisture holding capacity of the soil and to adopt farming techniques appropriate to the available resources.

The optimum use of land is in fact scientifically tantamount to an optimum use of the available land, water and other natural endowments (like sunshine). The amount of biomass produced from any plot of land through the process of photosynthesis of sunlight and the replenishment and regeneration of soil fertility through the recycling part of the organic matter available from the biomass produced through this process,

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depends crucially on soil properties and the quantum of water and sunlight available to it. In the simplest terms, GSS's watershed programe consisted of the survey and mapping of the village level natural resources (primarily land-water-biomass), not as an external scientific input but participative with the local community. This is what the perceptions of Robert Chambers in his book titled," Rural Development – Putting the Last First" are most relevant: "The links of modern scientific knowledge with wealth, power and prestige condition outsiders to despise and ignore rural people's own knowledge. Priorities in crop, livestock and forestry research reflect biases against what matters to poor rural people". Rural people's knowledge is often superior to that of outsiders. Examples can be found in mixed cropping, knowledge of the environment, abilities to observe and discriminate, and results of rural people's experiments. Rural people's knowledge and modern scientific knowledge are complementary in their strengths and weaknesses. Combined they may achieve what neither would alone. For such combinations, outside professionals have to step down off their pedestals, and sit down, listen and learn.

There are a number of success stories in watershed management – Anna Hazare (Ralegaon Siddhi); Rajendra Singh, Tarun Bharat Sangh, Alwar; Late Prem Bhai and Dr. Ragini Prem, Banvasi Seva Ashram (Sonebhadra). All these projects have few common characteristics emphasis on social issues, social mobilization, participatory management, transparent project monitoring and evaluation, and a strong sense of ownership by the local community. At the same time, replication of these success stories has been difficult, as the Ralegaon Sidhi experiment testify. Despite the praise, that it has received, the Maharashtra government's attempt a decade ago to replicate Anna Hazare's model for rural development across 300 villages ended in failure (D'isilva 2003).

Various training programmes, Farmer's meeting, exposure visits, demonstrations and farmers fair were organized for farmer's motivation and their active participation and creating awareness about watershed programme.

Role of Women

Women play predominant role in agriculture and activities related with natural resource management. Women of the area are involved in goat rearing, animal husbandry, and agriculture. Being a forest area, the imposition of access restrictions on common and forest land has led to successful regeneration of the resources in watershed development areas. The Watershed Development project Guidelines (Government of India) state that private land owners shall contribute 10 percent of their land development cost either through cash or through voluntary labour, the contribution done on common land shall be 5% which will be charged from people using the land such as gatherers of fodder and fuel. Women of the area actively participate in the decision making on the pattern of agriculture, schedule of irrigation, and other activities linked with their livelihood. GSS is working as project implementing agency (PIA) in the watershed development Programme. Along with PIA, A watershed committee is responsible for planning and decision making in watershed development Programme at the village level. A lot of emphasis has been laid in watershed development on training and extension, and the formation of the farming SHGs of people with common interest. Female labour was engaged in good proportion in

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different activities.

Strategies for Resource Management

1. Identification of Village Volunteers

The watershed committee members and GSS team identified community leaders, opinion makers, village youth and active women during the entry point work and preparatory discussions as volunteers. These volunteers helped GSS in organizing various programmes.

2. Formation of Users Group

GSS formed 'users group' of people who were affected most, either beneficially or adversely. A pond benefited those farmers whose wells got groundwater recharge while on the other hand; the farmers whose land got submerged are adversely affected. There was a third category of the resource poor farmers, whose need for water is being met by a new well in the area with augmented groundwater. Similarly farmers, who have previously received the water downstream, have been adversely affected by the construction of pond. GSS and watershed committee (WC) ensured that benefits are shared equally with a tilt in favour of the poor. Members of the users group worked jointly with WC in planning, designing and implementation of different programmes.

GSS initiated mutual confidence building activities such as exposure visits to successful enterprises / projects / institutions where the users saw the positive impact of collaborative action on equitable water sharing, management of common property resources, innovative agriculture etc. Training programmes were organized for the effective management of resources by users groups with the assistance of experts in the field.

SHGs formed by GSS, are usually informal groups whose members have a common perception of need and importance towards collective action. These groups promote savings among members and use the pounded resources to meet the emergent needs of their members, including the consumption needs. GSS acted on the democratic culture in which all the members participated actively in the decision making process by taking part in the discussion the cohesiveness among the members has increased due to homogeneity of the groups in terms of education, occupation, income distribution, sex composition.

Training programmes have been organized for the capacity building of group members on the technical and organizational aspects of managing SHGs. It helped in the skill upgradation of SHG members in the respective activities.

Promotion of innovative agriculture practices

Efforts were made for the promotion of innovative agricultural practices through land preparation, contour farming, crop geometry, mixed cropping, strip cropping, and residue management, adoption of organic manures and optimum use of fertilizers. GSS motivated farmers to exchange old seeds with the new seeds of 'Seed Bank' to increase food grain productivity.

People's Participation

To protect the fuel-fodder plantations and soil conservation work, community adopted 'social fencing'. Women were involved in these programmes, because

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they constitute the main working force.

Impact on Human Development

Watershed development programme has increased the per capita income and checked the migration of the community. The increased income and increase in production in cultivable and irrigated land motivated community for their need of better education and health services. Now the children of the area are studying in nearby schools. The farmers are growing two-three crops on their land even vegetables, which has reduced malnutrition and helped in the improvement of health.

Benefits

The tangible and intangible benefits of watershed development are outlined as follows:

i. Increase in Crop Yield: The average crop yield of wheat increased form 10 q/ha to 18 q/ha.
ii. Supplement of irrigation, and improved seed. The average yield of jowar increased from 7 to 12 q/ha with the adoption of scientific cropping techniques, introduction of new variety seeds and soil moisture.
iii Water yield: 40% of the total rainfall can be taken as a broad norm for determining the total water yield that can be collected from similar areas. 50% of the stored water was made available for supplemental irrigation after allowing evaporation and seepage losses and dead storage.
iv Fodder yield: The fodder yield in the catchment area increased from 7 to 18 q/ha within 5 years. With this increase health and productivity of livestock is improved.
v Employment: Increased productivity, improved human development indicators and infrastructure has propelled the development outcome in increasing the employment opportunities for community in agriculture and non-farm activities. On-going activities linked with the digging of ponds, construction of check dam, contour bonding and other structures have generated adequate man day's employment for the rural community.

Ground water recharge

The cumulative effect of different treatments on hills, foot hills, nallas, surface ponds, bunding and leveling of agricultural lands had caused significant improvement on recharge capacity of water in the wells and hand pipes. Prior to launching the project wells of the village use to become dry during the critical summer months April to June. After successful completion of watershed development the cropping intensity in the watershed area showed steady increase reaching to 141% and the average family income of the watershed area increased by Rs.17457 per annum.

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SURYADATTA

Challenges in Creation of Digital Infrastructure

Dr. Archana Wafgaonkar

Abstract

Digital services depend on infrastructure for delivery. Without the infrastructure, presence of digital services is impossible. There are many challenges to the making of Digital economy like lack of skilled workers, infrastructure problems, problem of providing broad base digital access. In addition there are problems like digital literacy, increase digital inclusion and improving digital connectivity.

Keywords

Digital Infrastructure, digitization, digital economy, internet

Digital Infrastructure is one of the key enabling technologies for an interconnected and instrumented world which is called 'Internet of Things'. It is used to describe a phenomenon in which physical objects such as devices are smart and connected with the ability to share and collect data to unleash new technology. This new technology has changed the life of people. These devices such as mobile phones, tablets, sensors and embedded chips enable access to large amount of data by applying real time analytics and providing insight for effective action. There are a lot of improvements in the different devices due to digital infrastructure. The new Digital Age people will be integrating clothing machines which will keep an inventory of clean clothes and will suggest cloths based on the user's daily schedule. Haircuts would be automated and precise. Due to digital infrastructure there are improvements in the quality of life things that which make you safer, healthier and more engaged. Digital infrastructure consists of ecosystem of connected devices exchanging information with each other. One example of such digital infrastructure is Massachusetts Institute of Technology (MIT), which developed networked radio frequency identification (RFID) and other sensing technologies in 1999. With the introduction of personal computer the number of active internet connections reached millions in number. Then there was introduction of smart phones and tablets. Then there was launch of multiple devices connected to each other followed by discovery of wearable devices like fitness bands, watches and eyeglasses. Digital infrastructure has impacted almost all industries and provides opportunities to both new and existing players to gain recognitions by innovations and by providing phenomenal growth. Application

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areas of digital infrastructure areas are smart cities, smart car, mobility, smart home, assisted living smart industries, smart energies and grids and smart healthcare.[1]

Internet is a network of networks, which connects number of companies to create a large and complex ecosystem. About 2.5 billion people, one third of the world's population are connected to internet today. In future internet users will grow to 4 billion by 2020, more than half the global population. There are a lot of expectations on the expansion of digital economy. The digital economy is growing at more than 10% a year, significantly faster than the economy as a whole. In emerging markets, the internet economy is growing at 12-25% per year, and it is having a far-reaching social and political, as well as economic, impact. Around the world it is the increasingly important source of growth and frequently jobs. Multiple parties have invented trillions of dollars in capital and operating expenditure and research and development to construct and maintain the infrastructure that supports the digital ecosystem that makes the digital economy possible. These parties include communications service providers, or CSPs (fixed line and wireless telecommunications companies, cable companies, and bandwidth providers), digital service and content providers (content, media and IT service companies), and hardware and software manufacturers (infrastructure equipment, device, software and component manufacturer. Many stakeholders play a role in digital infrastructure. Government has three important roles in creation of digital infrastructure -1) policy-makers 2) regulators and the owners 3) dispensers of spectrum for mobile networks .Other Non-governmental organizations (NGOs), industry associations, standards bodies, multi stakeholder associations such as the World Wide Web Consortium (W3C), the Internet Corporation for Assigned Names and Numbers (ICANN) and the International Telecommunication Union (ITU), a UN agency, are also the important players in the formation of digital economy. All these players are responsible for the fixed and mobile networks, exchange points, data centers devices and network.[2]

Digital Infrastructure [3]

Clear understanding of goals and direction for the future can overcome indecision and dissimilarities in the short term created by current challenges and emerging trends. Internet functionality is based on the three important aspects made by different users of internet who will decide the how internet will function in future and they are–

1) Planning should be followed by relative long term actions which will result in long term growth of digital economy. In order to achieve this government should recognize its role in economic development. Also international guidelines should be established to enable flow of data and services by

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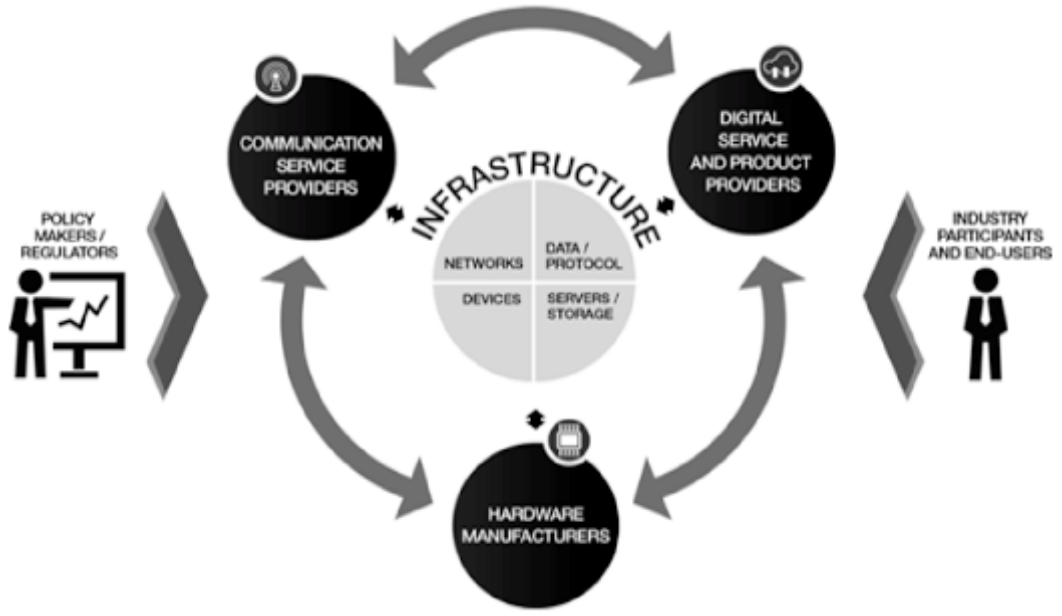
maintaining privacy and security concerns. Steps should be taken to establish regional and international digital markets to remove barriers from cross border trade and cooperation. International digital services should be started in order to promote and support local initiatives.

2) Barriers should be removed in order to promote the expansion of digital infrastructure. New technological business model should be experimented by removing barriers. Restrictions on municipal and other local investments in high speed broadband network should be relaxed. Stakeholders should be encouraged in order to practice cooperative business models for the achievement of greater utilization of the infrastructure and for increasing demands of digital services. There should be innovative finding and new market access mechanisms to support market based infrastructure investments in emerging markets carried out by governments, NGOs and businesses.

3) Policies and regulations should be modernized in order to bring increase in investment and innovation throughout the internet ecosystem. Policy makers should be in a position to tackle the challenges posted by the digital economy. Issues related to this need global coordinated solution. Policies and regulations should be modernized in order to bring new innovations and investments across the entire ICT value chain. New regulations should be added for regulating new sectors. Encourage service level innovation to allow targeted consolidation of mobile operators. More emphasis should be given for the private structure mobile use and new allocation and utilization policies should be formulated. [4]



Digital Infrastructure [3]

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Digitization of India

Efforts are carried out to make India a digital India on large scale. Digitization of India will not only increase the efficiency of the government and public sector but also would bring about huge democratization of economy. Since technology has replaced all manual labor, but there is the need of skilled workers for the new technology like information technology. Digital India campaign aims to make technology central to enable change. The program encompasses three areas -1) Universal access to digital infrastructure 2) government services 3) citizen empowerment. India's principal aim is to provide broad base digital access and to build on it to improve government and market efficiency. There are major issues in development of digital India like problems of digital infrastructure in rural and urban India. Efforts are carried out by the government to raise digital literacy, increase digital inclusion and improve digital connectivity.[5] Major issues faced by India are -1) extent of state subsidy for connectivity as a public good, the role of startups and private sector in the deployment of a digital infrastructure in rural and urban India, the increasing female labor force participation and global competitiveness of the semi-skilled and skilled Indian workforce. Digital India program aims at transforming India into a knowledge economy. Unless there is healthy digital infrastructure it is not possible to transform India into a knowledge economy. Digital empowerment is another key area. The government is planning to put all the central government staff on the e-governance platform. [6]

Digital infrastructure is expected to create tremendous opportunities for various technological applications which would power trends like online commerce, digital health, smart cities, smart utilities and smart phones. Investment in digital infrastructure including the creation of smart policy framework, public private partnership and business models will stimulate the growth of this area. Long term success of digital infrastructure in a country like India could depend upon how well infrastructure operations work along with technological challenges. [7]

Digital India program is a program of $17-billion used to build optical fiber network that will connect India's gram panchayats, or village-level governments, aims to cover the entire country in three years. The entire country will be covered by broadband within three years and the internet will reach the remotest villages. The program will speedily increase internet usage in India and boost the economy.[8]

Conclusion

Digital Infrastructure is one of the key enabling technology using devices which are connected and shared and are used to collect data to unable new technology. Due to digital infrastructure there are improvements in the quality of life things which make you safer, healthier and more engaged. Digital infrastructure has impacted almost all industries and provides opportunities to both new and existing players to gain recognitions by innovations by providing phenomenal growth. Application areas of digital infrastructure are smart cities, smart car, mobility, smart home, assisted living smart industries, smart energies and grids and smart healthcare. Planning should be followed by relative long term actions which will result in long term growth of digital economy. Barriers

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should be removed in order to promote the expansion of digital infrastructure. Policies and regulations should be modernized in order to bring increase in investment and innovation throughout the internet ecosystem. Digital India program started by government of India aims at transforming India into a knowledge economy. Unless there is healthy digital infrastructure it is not possible to transform India into a knowledge economy.

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SURYADATTA

Growth of School Education In India : A Study

Dr. D. Ashalatha

Abstract

Primary education constitutes a very important part of the entire structure of education. It is at this stage, the child starts going to a formal institution and formal education starts. Primary education in India has been under the control of a number of agencies. It is still under the management of the private agencies, though, the state is increasingly taking the responsibility of providing free and compulsory elementary education to all. Article 45 of the constitution provides for free and compulsory education for all children in the age-group 6-14 years, up to a minimum level. The whole idea has been woven into the concept of Universalization of Elementary Education (UGC). The level of compulsory education as envisaged in this Article corresponds to the elementary education of eight year's duration from class I to class VIII for the children aged 6-14 years. The universalization of Elementary Education has been recognized as a constitutional obligation in India by the year 1960 but the target has not been achieved even after 54 years of the target year. Secondary education occupies a critical position in the entire educational structure and is described by many as the lintel of the entire educational edifice. It has been observed that secondary education takes place at the critical stage of adolescence; when attitudes to life and work are being shaped. In this paper we examined the growth in the enrollment of students by sex and the corresponding increase in the number of schools and also examined the trends in number of teachers by sex employed in primary, upper primary and secondary schools and to estimate the student-teacher ratio. The enrollment of girls has grown at a higher rate than that of boys during the entire period of the study. The significance of women teachers has been increasing over time and this should contribute positively to the growth and development of students. One important reason of the downfall in the quality and standard of school education during the recent decades may be the uneven growth of enrollment, number of teachers and number of schools, the enrollment growing faster than the other two.

Introduction

One of the important characteristic features of democracy is that it presupposes an educated and enlightened society. Democracy, both as a form of the government and as a way of

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life, cannot function when the society is uneducated and ignorant. Education and modernization are the two wheels of the same cart. Both, when combined together, lead to a rapid socio-economic development of a nation.

Primary education constitutes a very important part of the entire structure of education. It is at this stage, the child starts going to a formal institution and formal education starts. Primary education in India has been under the control of a number of agencies. It is still under the management of number of private agencies, though, the State is increasingly taking the responsibility of providing free and compulsory elementary education to all. Article 45 of the Constitution provides for free and compulsory education for all children in the age-group 6-14 years, up to a minimum level. The whole idea has been woven into the concept of Universalization of Elementary Education (UEE). The level of compulsory education as envisaged in this Article corresponds to the elementary education of eight year's duration from class I to class VIII for the children aged 6-14 years. The universalization of Elementary Education has been recognized as a constitutional obligation in India by the year 1960 but the target has not been achieved even after 54 years of the target year.

The importance of secondary education was recognized long ago in India. The Kothari Commission emphasized the importance of secondary education. Secondary education occupies a critical position in the entire educational structure and is described by many as 'the lintel of the entire educational edifice' (NIEPA, 2001: v). It critically provides links between various sub sectors of education such as elementary education, higher education, vocational and technical education besides work. It has been further observed that secondary education takes place at the critical stage of adolescence; when attitudes to life and work are being shaped.

2. Growth of Enrollment and Primary Schools in India

Education plays a vital role in the process of human resources development. For an overall development of the economy, development of education in general and Universalization of literacy elementary education in particular, are given very high priority in India and in other developing countries of the World. Therefore, a high priority is to be assigned to investment in education. Primary education constitutes a very important part of the entire structure of education. It is at this stage, the child starts going to a formal Institution and formal education starts. Education which he receives at this juncture provides the basic foundation for his physical, mental, emotional, intellectual and social development. Primary education deserves the highest priority, not only on grounds of social justice and democracy, but also for raising the competence of the average worker and for increasing the national productivity.

Article 45 of the Indian Constitution guarantees provision of free and compulsory education to all children up to the age of 14. Apart from being a Constitutional obligation, the provision of universal elementary education is crucial for spreading mass literacy, which is a basic requirement for economic development, modernization of the social structure and effective functioning of any democratic institution. It also represents an indispensable first step towards the

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provision of equity of opportunity to all citizens.

The growth of the number of primary schools and the enrollment into primary education (schools), and the number of children per school for selected years during the period of our study is provided in the Table - 1. The First Five Year Plan (1951-1956) began on 1st April, 1951. At the beginning of the First Plan in 1950-51, there were 2, 09,671 primary schools in the country. By 1965-1966, when the education commission submitted its report, the number of primary schools had increased to 3, 91,064. When the progress was reviewed in 1985-1986, it was found that the number of primary schools had increased to 5, 28,872. The period from 1986 onwards has been the period of implementation of the NPE-1986. Therefore, it is expected that elementary education might have developed considerably, both qualitatively and quantitatively. The total number of primary schools stood at 8, 19,900 in 2009-10. Later it is decreased to 7, 90,640 by 2013-14. It is better not to over emphasize changes in growth rates over different phases because for reasons of arithmetical property, when one starts with a low base (as in 1951) the period immediately succeeding 1951 will have high rate and the subsequent periods lower rates. But comparison between the growth rates of boys and girls in any one phase assumes importance. In the analysis below, the differences in the growth rates of boys and girls receive greater attention compared to differences between periods. The index of growth of schools taking 1950-1951 as the base shows that the increase is not substantial as compared to the enrollment of children in primary schools. The annual compound growth rate of primary schools over a period of our study recorded 2.10 per cent.

The total enrollment in primary schools in the year 1950-1951 was 19.2 million children of which 13.8 million were boys and 5.4 million were girls. It constitutes 28.12 per cent of the enrollment of girls to the total enrollment. The enrollment had increased to 50.5 million children in 1965-1966. The enrollment of girls was 18.3 million, which constituted 36.24 per cent of the total enrollment. The total enrollment in primary schools had increased to 87.4 million children in 1985-1986 of which 52.2 million boys and 35.2 million girls. The girls enrolled constituted 40.27 per cent to the total enrollment. In 2009-10 the total enrollments of children increased to 133.6 million of which 69.7 million were boys and 63.9 million were girls. Here the girls enrolled constituted 46.71 per cent to the total enrollment. An interesting trend which can easily be observed is that enrollment of girls has grown at a higher rate than that of boys during the entire period of study. Ultimately the enrollment of children decreased to 130.0 million in 2013-14. Due to awareness and importance of education of children, common people also sending their children to the English medium schools. Children enrollments in private unrecognized primary schools are not recorded in this data. So, due to this reason enrolment of children in recognized primary schools decreased in 2013-14.

The annual compound growth rate of enrollment of total students over a period of our study recorded 3.03 per cent. The growth rate of enrollment in the case of girls is much higher than in the case of boys over the period of our study. The enrollment of students has increased at a higher rate than the number of schools and teachers.

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Table -1: Enrollment and number of recognized primary schools in India: 1950-1951 to 2013-14

Year	Primary Schools	Index	% growth rate over previous period	No. of boys enrolled (6-11 years) (in millions)	Index	% growth rate over previous period	No.of girls enrolld (6-11 years(in millions)	Index	% growth rate over previous period	Total enrollment (in millions)	Index	% growth rate over previous period	No. of children per school
950-51	209671	100	--	13.8	100		5.4	100		19.2	100		91
955-56	278135	133	32.65	17.1	124	23.91	7.5	139	38.89	24.6	128	28.12	88
960-61	330399	157	18.79	23.6	171	38.01	11.4	211	52.00	35.0	182	42.28	106
965-66	391064	186	18.36	32.2	233	36.44	18.3	339	60.53	50.5	263	44.28	129
970-71	408378	195	4.43	35.7	259	10.87	21.3	394	16.39	57.0	297	12.87	139
975-76	454270	217	11.24	40.6	294	13.72	25.0	463	17.37	65.6	342	15.09	144
980-81	494305	236	8.81	45.3	328	11.58	28.5	528	14.00	73.8	384	12.50	149
985-86	528872	252	6.99	52.2	378	15.23	35.2	652	23.51	87.4	455	18.43	165
990-91	560935	267	6.06	57.0	413	9.19	40.4	748	14.77	97.4	507	11.44	174
995-96	590421	281	5.26	62.4	452	9.47	47.4	878	17.33	109.8	572	12.73	186
'99-00	641695	306	8.68	64.1	464	2.72	49.5	917	4.43	113.6	592	3.46	177
004-05	767520	366	19.61	69.7	505	8.74	61.1	1131	23.43	130.8	681	15.14	170
009-10	819900	391	6.82	69.7	505	0	63.9	1183	4.58	133.6	696	2.14	163
013-14	790640	377	-3.57	67.2	487	-3.59	62.8	1163	-1.72	130.0	677	-2.64	164
Annual Compound Growth Rate													
	2.10			2.50			3.91			3.03			

Sources: 1.Annual reports of Ministry of Human Resource Development, Government of India.
2. Selected Educational Statistics, Ministry of Human Resource Development, Government of India.

2.1. Increase in number of students per teacher in primary schools

So far, we have examined the size and growth of primary education in the country during the period of six and a half decades. But, they do not really indicate the quality of education. One indicator of the quality is the student-teacher ratio. So we, as a first step examine the number of teachers employed in the primary schools in the country and the rate of growth of the teachers by sex during the period of the study.

Table - 2 shows that there were 5, 38,000 teachers employed in primary schools in 1950-1951 of which 15.24 per cent were women. By 2013-14, the total number of teachers posted in primary schools increased to 26, 84,000 of which 46.68 per cent were female. The male teachers were decreased from 13, 19,000 in 2004-05 to 12,08,000 in 2009-10. Ultimately it is increased and stood at 14, 31,000 in 2013-14. It is interesting that the index of female teachers increased at higher rate than that of male teachers throughout the period under study. This has borne results in that the women teachers have improved their share in the total in primary schools. This also may be due to implementation of reservation policy in some states in the country in favor of women. One should consider that increase in the number of women teachers is a healthy sign for the reasons (i) that it contributes to gender equality, and (ii) the women teachers' exhibit care and patience, their general traits, in teaching children.

The annual compound growth rate of total teachers recorded 2.54 per cent. The growth rate of female teachers was 4.35 per cent against the growth rate of 1.80 per cent for male teachers. The growth rate of female teachers was much higher than that of male teachers in the total study period.

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Note, however, that the number of teachers has not increased in the country in consonance with the increase in the number of students enrolled. This has resulted in an increase in student-teacher ratio over time except in 1955-1956, 1975-1976, 1995-96, 1999-2000, 2009-10 and 2013-2014. It shows that the ratio was 36:1 in 1950-1951 and the ratio was constant in 1955-1956. Later it increased to 54:1 in 1970-1971 then the ratio continuously increased to 60:1 in 1990-1991. Later it was constant in 1995-1996 and it reached to 60:1 in 2004-05 and the ratio was constant in 2009-10 then it is decreased to 48:1 in 2013-14. Though the government has been insisting on a student-teacher ratio of 40 students per teacher for aided schools, it has never been possible for the government to achieve this objective. The data presented in Table-2 indicates only the country's average, but in most of the schools, the student teacher ratio is observed to be more than 100:1. This adversely affects the quality of education at primary level, because the school teacher does not find any motive to teach such a huge number, let alone paying the much needed individual attention at the stage of primary education.

Table - 2: Number of teachers employed by sex in primary schools in India: 1950-1951 To 2013-14

(In 000s)

Year	Male	Index	% growth rate over previous period	Female	Index	% growth rate over previous period	Total	Index	% growth rate over previous period	Student-Teacher Ratio
1950-51	456	100		82	100		538	100		36
1955-56	574	126	25.88	117	143	42.68	691	128	28.25	36
1960-61	615	135	7.14	127	155	8.55	742	138	7.38	47
1965-66	764	167	24.23	180	219	41.73	944	175	27.22	53
1970-71	835	183	9.29	225	274	25.00	1060	197	12.29	54
1975-76	965	212	15.57	283	345	25.78	1248	232	17.73	53
1980-81	1021	224	5.80	342	417	20.85	1363	253	9.21	54
1985-86	1094	240	7.15	402	490	17.54	1496	278	9.76	58
1990-91	1143	251	4.48	473	577	17.66	1616	300	8.02	60
1995-96	1187	260	3.85	553	674	16.91	1740	323	7.67	60
1999-00	1232	270	3.80	687	838	24.23	1919	357	10.29	59
2004-05	1319	289	7.06	842	1027	22.55	2161	402	12.61	60
2009-10	1208	265	-8.42	1009	1230	19.83	2217	412	02.59	60
2013-14	1431	314	18.46	1253	1528	24.18	2684	499	21.06	48
Annual Compound Growth Rate										
	1.80			4.35			2.54			

Sources: 1. Annual reports of Ministry of Human Resource Development, Government of India
2. Selected Educational Statistics, Ministry of Human Resource Development, Government of India.

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3. Development of Upper Primary (Middle) Education

From Table-3 it may be observed that there were only 13,596 upper primary schools in the country in 1950-1951 and this number continuously increased to 4, 01,079 in 2013-14. The index of upper primary schools recorded a much higher increase than that of index of primary schools. The annual compound growth rate of upper primary schools was 5.43 per cent for the entire period of study. There were 3.1 million children enrolled in upper primary schools in 1950-1951, of which 0.5 million were girls. They constituted only 16.13 per cent of total enrollment. Later the total enrollment rose to 10.5 million in 1965-1966. The enrollment of girls was 2.8 million, or 26.67 per cent of the total enrollment. The total enrollment in these schools had increased to 27.3 million in 1985-1986 in which they were 17.7 million boys and 9.6 million girls. The enrollment in upper primary schools ultimately reached to 65.7 million in 2013-14, of which 32.0 million were girls or 48.71 per cent of the total enrollment. An interesting trend which can easily be observed is that enrollment of girls has grown at a higher rate than boys during the period of study in upper primary education. It is emphasized that the index of girls' enrollment in upper primary education is much higher than that of index of girls' enrollment in primary education. It is a positive sign and shows the improvement of upper primary education in the country during the study period.

The annual compound growth rate of enrollment of total children in the study period was 4.89 per cent. It is interesting that the growth rate of enrollment in the case of girls (6.71 per cent) is more than that of boys (4.08 per cent) over the period.

Table - 3: Enrollment and number of recognized Upper primary schools in India: 1950-1951 to 2013-14

Year	Upper Primary Schools	Index	% growth rate over previous period	No. of Boys enrolled (11-14 years) (in million)	Index	% growth rate over previous period	No. of Girls enrolled (11-14 years) (in million)	Index	% growth rate over previous period	Total enrollment (in millions)	Index	% growth rate over previous period	No. of children per school
1950-51	13596	100		2.6	100		0.5	100		3.1	100		228
1955-56	21730	160	59.83	3.8	146	46.15	1	200	100.00	4.8	155	54.84	221
1960-61	49663	365	128.54	5.1	196	34.21	1.6	320	60.00	6.7	216	39.58	135
1965-66	75798	557	52.62	7.7	296	50.98	2.8	560	75.00	10.5	339	56.72	138
1970-71	90621	666	19.55	9.4	361	22.08	3.9	780	39.28	13.3	429	26.67	147
1975-76	106571	784	17.60	11	423	17.02	5	1000	28.20	16	516	20.30	150
1980-81	118571	872	11.26	13.9	535	26.36	6.8	1360	36.00	20.7	668	29.37	174
1985-86	134846	992	13.72	17.7	681	27.34	9.6	1920	41.18	27.3	881	31.88	202
1990-91	151456	1114	12.32	21.5	827	21.47	12.5	2500	30.21	34	1097	24.54	224
1995-96	171216	1259	13.05	25	961	16.28	16	3200	28.00	41	1322	20.59	239
1999-00	198004	1456	15.64	25.1	965	0.40	17	3400	6.25	42.1	1358	2.68	212
2004-05	274731	2021	38.75	28.5	1096	13.54	22.7	4540	33.53	51.2	1652	21.61	186
2009-10	394100	2899	43.45	31.7	1219	11.23	27.8	5560	22.47	59.5	1919	16.21	151
2013-14	401079	2950	01.77	33.7	1296	6.31	32.0	6400	15.11	65.7	2119	10.42	164
Annual Compound Growth Rate													
Total period	5.43			4.08			6.71			4.89			

Sources: 1. Annual reports of Ministry of Human Resource Development, Government of India
2. Selected Educational Statistics, Ministry of Human Resource Development, Government of India.

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3.1. Student-Teacher Ratio in Upper Primary Schools

As noted earlier, the student-teacher ratio shows the quality of education. Here, we examine the growth in the number of teachers employed in the upper primary schools in the country during the period under study. The data are presented in Table-4. It is observed that there were 86,000 teachers employed in upper primary schools in 1950-1951, of which 13,000 were women, or 15.12 per cent of the total. By 2013-14 the total number of teachers in upper primary schools increased to 25, 13,000.

The number of women teachers reached on all time high in 2013-14(11, 38,000) and they constituted 45.28 per cent of the total teachers, indicating that women teaching community has been on the increase all through. One should consider this to be a healthy sign for the reasons (1) that it contributes to gender equality and (2) that women teachers exhibit care and patience, their general traits, in teaching children. The number of both in male and female teachers in upper primary schools shows an increasing trend over the period of our study. The index of female teachers recorded a much higher increase than that of the male teaches. This may be due to implementation of reservation policies in some states in the country in favour of women.The annual compound growth rate of total teachers was 5.41 per cent in the study period. It is interesting that the recorded growth rate of female teachers at 7.24 per cent was higher than that of the male teachers at 4.69 per cent in the study period. The growth rates of female teachers have been higher than that of male teachers in the study. During the period under study, the increase in the number of teachers was 24, 27,000 (25, 13,000 - 86,000). As the enrollment in upper primary schools showed an increasing trend, it resulted in a favorable change in student-teacher ratio. It is observed that the ratio was 36:1 in 1950-1951 and it decreased to 19:1 in 1960-1961. Later the ratio gradually increased to 35:1 in 1995-1996. By 2013-14 the ratio decreased and stood at 26:1. Anyhow this figure is less than the student-teacher ratio of 40 recommended by the government for aided schools.

Table – 4: Number of Teachers employed by sex in Upper Primary Schools in India: 1950-1951 To 2013-14

Year	Male	Index	% growth rate over previous period	Female	Index	% growth rate over previous period	Total	Index	% growth rate over previous period	Student-teacher ratio
1950-51	73	100		13	100		86	100		36
1955-56	132	181	80.82	19	146	46.15	151	175	75.58	32
1960-61	262	359	98.48	83	638	336.84	345	401	128.48	19
1965-66	389	533	48.47	139	1069	67.47	528	614	53.04	20
1970-71	463	634	19.02	175	1346	25.90	638	742	20.83	21
1975-76	554	759	19.65	224	1723	28.00	778	905	21.94	21
1980-81	598	819	7.94	253	1946	12.95	851	989	9.38	24
1985-86	663	908	10.87	305	2346	20.55	968	1125	13.75	28
1990-91	717	982	8.14	356	2738	16.72	1073	1248	10.85	32
1995 96	756	1036	5.44	409	3146	14.89	1165	1355	8.57	35

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Year	Male	Index	% growth rate over previous period	Female	Index	% growth rate over previous period	Total	Index	% growth rate over previous period	Student-teacher ratio
1995-96	756	1036	5.44	409	3146	14.89	1165	1355	8.57	35
1999-00	829	1136	9.66	469	3608	14.67	1298	1509	11.42	32
2004-05	992	1359	19.66	597	4592	27.29	1589	1848	22.42	32
2009-10	1014	1389	2.22	764	5877	27.97	1778	2067	11.89	33
2013-14	1375	1884	35.60	1138	8754	48.95	2513	2922	41.34	26
Annual Compound Growth Rate										
	4.69			7.24			5.41			

Sources: 1. Annual reports of Ministry of Human Resource Development, Government of India
2. Selected Educational Statistics, Ministry of Human Resource Development, Government of India.

4. Growth of Secondary Education in India

The importance of secondary education was recognized long ago in India. The Kothari Commission emphasized the importance of secondary education. The resolution adopted by the Government of India on the Kothari Commission affirms that. Educational opportunity at the secondary (and higher) level is a major instrument of social change and transformation' (NCERT, 1970: xix). Secondary education occupies a critical position in the entire educational structure and is described by many as 'the lintel of the entire educational edifice' (NIEPA, 2001: v). It critically provides links between various sub sectors of education such as elementary education, higher education, vocational and technical education besides work. It has been further observed that secondary education takes place at the critical stage of adolescence; when attitudes to life and work are being shaped.

4.1. Growth of Schools and Enrolment of Students in Secondary Education

In Table-5, the growth of the number of secondary schools and the enrollment into secondary education, and the number of students per school for selected years during the period of our study is provided. The First Five Year Plan (1951-1956) began on 1st April, 1951. At the beginning of the First Plan in 1950-1951, there were 7,416 secondary schools in the country. This figure increased to 2, 26,613 in 2013-14. These figures include high schools, higher secondary schools, intermediate colleges, Junior colleges, community colleges and PUC sections wherever they exist. The index of growth taking 1950-1951 as the base shows that the increase is not substantial as compared to the enrollment of students in secondary schools. As per the percentage growth rate over previous period in the case of secondary schools, the growth of the schools in the period 1951-1961 is the highest record i.e., 133.67. The table shows that the growth rate of schools for the period from 1950-1951 to 1970-1971 are much higher than that of the remaining period of our study. The annual compound growth rate of schools is recorded 5.49 per cent.

The total enrollment in secondary stage

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in the year 1950-1951 was 15 lakhs students of which 13 lakhs were boys and only 2 lakhs were girls. Girls constituted only 13 per cent to the total enrollment. The total enrollment had increased gradually and reached to 591.00 lakhs in 2013-2014. The enrollment of girls was 279.00 lakhs which constituted 47.21 per cent of the total enrollment.

An interesting trend which can be observed is that enrollment of girls has grown at a higher rate than that of boys during the entire period of our study. The annual compound growth rate of total enrollment at secondary stage was 5.91 per cent. The growth rate was 8.02 per cent for girls and 5.09 per cent for boys during the study period. The enrollment of girls has increased at a faster rate than that of boys throughout the study period.

Table-5: Number of Recognized Schools and Enrollment by Sex in Secondary Schools in India, 1950-1951 to 2013-2014

Year	Second-ary Schools (units)	Index	% growth rate over previous period	No. of boys enrolled (lakhs)	Index	% growth rate over previous period	No. of girls enrolled (lakhs)	Index	% growth rate over previous period	Total enroll-ment (lakhs)	Index	% growth rate over previous period	No. of childre n per school
1950-51	7416	100	-	13	100	-	2	100	-	15	100	-	202
1960-61	17329	234	133.67	27	208	107.69	7	350	250.00	34	227	126.67	196
1970-71	37051	500	113.81	49	377	81.48	17	850	142.86	66	440	94.12	178
1980-81	51624	696	39.33	76	585	55.10	32	1600	88.23	108	720	63.64	209
1990-91	78619	1060	52.29	140	1077	84.21	69	3450	115.62	209	1393	93.52	266
1992-93	84086	1134	6.95	150	1154	7.14	77	3850	11.59	227	1513	8.61	270
1995-96	98134	1323	16.71	161	1238	7.33	88	4400	14.28	249	1660	9.69	254
1999-00	116820	1575	19.04	172	1323	6.83	110	5500	25.00	282	1880	13.25	241
2004-05	152049	2050	30.16	217	1669	26.16	154	7700	40.00	371	2473	31.56	244
2009-10	193880	2614	27.51	268	2062	23.50	217	10850	40.91	485	3233	30.73	250
2013-14	226613	3056	16.88	312	2400	16.42	279	13950	28.57	591	3940	21.86	260
Annual compound growth rate	5.49			5.09			8.02			5.91			

Sources: 1.Annual reports of Ministry of Human Resource Development, Government of India
2. Selected Educational Statistics, Ministry of Human Resource Development, Government of India.

4.2. Student-Teacher Ratio in Secondary Schools

So far, we have examined the size and growth of secondary education in the country for a period of 64 years. But, they do not really indicate the quality of education. One indicator of the quality is the student-teacher ratio. So, as a first step we examine the number of teachers employed in the secondary schools in the country and the rate of growth of the teachers by sex during the period of the study.

Table- 6 shows that there were 1, 27,000 teachers in secondary schools in 1950-1951 of which only 20,000 were women, and they constituted only 16 per cent to total. The total teachers increased gradually over a period of time and reached to 30, 72,000 in 2013-2014 of which 14, 24,000 were women and they

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constituted 46.35 per cent to total teachers. The index of female teachers increased at higher rate than male teachers throughout the period under study. The annual compound growth rate of total teachers between 1950-51 and 2013-14 was 5.10 per cent. The growth rate was 6.89 per cent for female teachers and 4.37 per cent in the case of male teachers. Reservation policies in some states in the country must have favored women to form increasing part of the total teachers.

The number of teachers has not been increasing in the country in consonance with the increase in the number of students enrolled. This has resulted in the increase in the student-teacher ratio over time except in 1960-1961, 1970-1971, 1999-2000 and 2013-2014. The ratio was 12:1 in 1950-1951, 11:1 in 1960-1961 and 10:1 in 1970-1971. Later it increased gradually and reached 17:1 in 1995-1996. It is increased and stood at 21:1 in 2013-2014 and then decreased to 19.1 in 2013-14. This figure is less than the student-teacher ratio recommended by the government. One should consider this to be a healthy sign.

Table-6: Number of Teachers Employed by Sex in Secondary Schools in India, 1950-1951 to 2013-2014

Year	Male (000s)	Index	% growth rate over previous period	Female (000s)	Index	% growth rate over previous period	Total (000s)	Index	% growth rate over previous period	Student-Teacher Ratio
1950-51	107	100		20	100		127	100		12
1960-61	234	219	118.69	62	310	210.00	296	233	133.07	11
1970-71	474	443	102.56	155	775	150.00	629	495	112.50	10
1980-81	658	615	38.82	254	1270	63.87	912	718	44.99	12
1990-91	857	801	30.24	416	2080	63.78	1273	1002	39.58	16
1992-93	908	848	5.95	445	2225	6.97	1353	1065	6.28	17
1995-96	982	918	8.15	511	2555	14.83	1493	1175	10.35	17
1999-00	1142	1067	16.29	578	2890	13.11	1720	1354	15.20	16
2004-05	1282	1198	12.26	801	4005	38.58	2083	1640	21.10	18
2009-10	1432	1338	11.70	898	4490	12.11	2330	1835	11.86	21
2013-14	1648	1540	15.08	1424	7120	58.57	3072	2419	31.85	19
Annual compound growth rate	4.37			6.89			5.10			

Sources: 1. Annual reports of Ministry of Human Resource Development, Government of India.
2. Selected Educational Statistics, Ministry of Human Resource Development, Government of India

5. Conclusions

Our data on the trends in the enrollment of children at the primary level showed that it was not commensurate with the growth of population in the relevant age group, notwithstanding the fact that universalization of primary education has been the avowed objective of the government. The quantitative growth of enrollment has been faster in the case of girls than in the case of boys throughout the period of six and a half decades in both primary and upper primary and secondary education. Besides, the enrollment of students has increased at a higher rate than the number of schools and teachers.

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As regards upper primary education the situation has been relatively better as compared to primary education. Even the student-teacher ratio on an average for the latest year of the survey is 26:1. This no doubt augurs well for upper primary education. There is, however a further need to effect improvements in upper primary education.

In the case of secondary education our data on the trends in the enrollment shows that enrollment in the case of girls is progressing faster than in the case of boys throughout the period of the study. The enrollment of students has increased at higher rate than the number of schools and teachers. To reflect upon the quality of education we arrived at student-teacher ratios. Let it be told that the significance of women teachers has been increasing over time and this should contribute positively to the growth and development of students.

5.1. Suggestions

(A). Suggestions for improving Elementary Education

The following steps may improve enrollment and retention and reducing the dropout rate.

1) Government should start or extend pre-primary schools and / or Nursery schools like Anganwadi or Balwadi centers wherever necessary especially in backward areas.
2) Mid-day meal or school nutrition programme should be started on a large-scale again and maintained by specially chosen persons. It can be an effective instrument in universalisation of elementary education.
3) Sanction of scholarships and providing fee concession to those scheduled caste and scheduled tribes children who got admitted in un-aided private schools or convents goes a long way and brings back these poorer strata into the fold.
4) Free supplying and distribution of textbooks and notebooks and school uniforms for all children as being done should be carried out more vigorously, plugging the loopholes.
5) Making community mobility which educates parents to understand need for education of their children.

(B). Suggestions for improving Secondary Education

1. Construct public schools;
2. Pilot innovative public-private partnership models;
3. Introduce double-shift teaching;
4. Expand use of open learning and new technologies;
5. Invest in curriculum revision
6. Invest in ICTs;
7. Develop and apply clear teacher performance standards, and decentralise teacher recruitment to district or school level;
8. Increase schools' autonomy and parental involvement;
9. Reform Grant-in-Aid;
10. Provide financial and in-kind assistance for poor and disadvantaged students; and
11. Provide financial incentives and technical support for states.

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SURYADATTA

Innovation and Creativity in Indian Business Industry

Dr. S. Balasubramanium

"Everyone has a talent. What is rare is the courage to nurture it in solitude and to follow the talent to the dark places where it leads."
– Erica Jong

Businesses, whether for-profit and nonprofit, are facing change like never before. Numerous driving forces to this change included a rapidly expanding marketplace due to globalization, increasing competition, diversity among consumers, and availability to new forms of technology. Creativity and innovation are often keys to the success of a business, particularly during strategic planning, and designing new products and services. Creative thinking and innovation are particularly useful during Strategic Planning and in Product and Service Management when designing new products and services.

Leaders and innovators know in their gut that creativity and innovation are the lifeblood of their organization. New ideas can lead to programs that are superior to those that are already going on or planned in the organization and which would have been divested or never initiated had a better idea or program come along. So, the mission of every leader should be to search continually for ideas and programs that are superior to the ones the organization is currently committed to. In a word, it's called Progress.

Some people believe that creativity emerges from unconscious thinking. Even if that were true, it would not necessarily impart any special mystery to creativity, compared to other aspects of thought and behavior. Unconscious thought appears to contribute to creativity no more or no less than to mundane activities. Most all thinking operates in the unconscious, including everything we do from taking out the garbage, to tying our shoestrings, to driving our car, to hundreds of other covert mental processes.

Creativity & Innovation

Innovation starts with spotting an opportunity or market need, followed by the development of a solution in the form of a business idea and it ends after market introduction of the product or service. The business idea can refer to a complete new product or service, in which existing technologies are

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combined (e.g. the IPod). At the start of the market introduction there are no users as of yet and therefore one does not know their wishes and demands. Slowly a market emerges and the requirements can be better articulated. Based on the continuously more articulated requirements and demands of the customer, the product can be further and further developed. At the same time the technology has to meet more specific demands and thus develop of its own accord. This technological development may require new production processes in combination with new organisational competences and business processes. Additionally, new product-market combinations often ask for new business models and thus an adaptation of the organisation. In short, applications, markets, technologies and organisations co-evolve and we have now described a system in which the technical aspects and the business aspects of innovation mutually influence and reinforce each other. This integrated system is also called-The Innovation Arena. Due to this reciprocal influence and co-evolution in the innovation arena small causes may have big consequences. A good example is the dominance of the technologically inferior VHS system over the superior Betamax and Video 2000 systems in the VCR market.

Innovation is inherently uncertain and full of risks. Therefore an important aspect of innovation management is the management of uncertainty. During the preparation or pre-project phase, we try to identify as much of these uncertainties as possible by asking key questions. We investigate the whole path from the transformation of an idea into a product or service, through implementation and commercialisation including the actual market introduction. This investigation is divided into a number of activities. Each activity has its specific key questions. The sequence of these activities is the same in almost every type of innovation, whether it concerns a new product, new service, new process or new business model.

The literature on the creative process is vast, and we can only summarize it. Have you seen the advertisement from IBM Corporation, in which there was a long, alphabetized list of "old English" words? The ad's caption read, "Anyone could have used these 4,178 words. In the hands of William Shakespeare, they became "King Lear." King Lear epitomizes the essence of creativity: to take commonly used and understood ideas and recombine them in elegant new ways; clearly the combinations have to have value. The basic condition for a creative act is to combine known elements into new combinations or perspectives that have never before been considered. The superior creative effort involves deliberately searching for many alternatives. Creativity is much more likely to emerge when a person considers many options and invests the time and effort to keep searching rather than settling for mediocre solutions.

The first and fundamental process of creative process is to have the clear idea about the problem and the person should be able to state the problem clearly. The effective thinker will start from first focusing the structure of the problem rather than going in to technical details of

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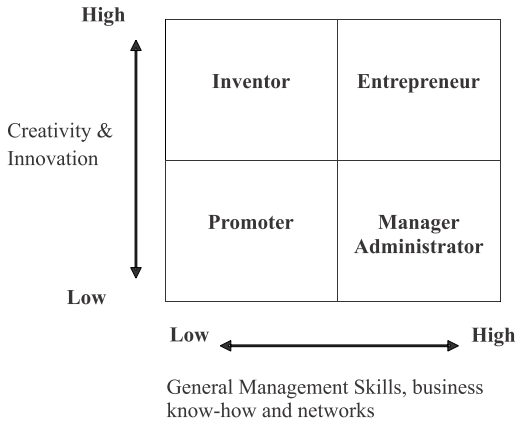
the problem. The next step will be mental operations which occur in the scratch pad of the mind, usually referred as working memory of the human.

Also brought into working memory from creative operations are the potential solutions. These come from each person's permanent memory store, his or her lifetime database of knowledge and experience. Other potential alternatives are brought in from such external sources of input as reading, ideas from colleagues, databases, and other sources. Next step is to get various permutations and combinations using these alternative solutions. During the whole process one thing which is important is that the whole process takes place in working memory, which, unfortunately, has very limited capacity. That is the reason why it is hard to find out new ideas, creations and innovations.

So to be more innovative and creative the necessary thing is to have exposure to various types of problems and a database of their solution. So that during the hour of need these can be used.

Who Is An Entrepreneur?

An entrepreneur is a person who has possession over a company, enterprise, or venture, and assumes significant accountability for the inherent risks and the outcome. The keyword here is the "risk". It comes always when somebody thinks about setting up any new business and remains there till the end of business. Today, there is dire need of such persons who can take this risk. During the time of crisis and slowdown in economies the need of entrepreneurs increase who can think over new ways of doing business. Whenever markets are down, people have taken up entrepreneurship. The spirit of entrepreneurship is to create opportunities during these moments as it helps you to pause, rethink and expand your vision to tap new opportunities and fresh ideas.



Indian Scenario

When we talk about Indian scenario in field of business creativity and innovation, we find that people have tendency to do business but we are lacking in number of good and organized entrepreneurs. There are thousands of small and medium sized entrepreneurs, who are individually doing very good job at their respective positions but not growing. We need people who can do businesses at greater scale and level. The reason is lack of innovation and creativity. The main reason is conservativeness of Indian parents about their children. Nobody wants his/her child to take risk. They want their children to grow with in boundary of homes and think only what is required. Children are not allowed to take risks because parents are afraid of it. But in the whole upbringing parents forget that childhood is the age of innovation and experiments. If a child is not allowed doing new things then he will not try to

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think about new ideas. Same way the employees would not think of anything new if not encouraged. Another reason may be that we are not very much exposed to business environment. The real business era came only after Indian government started reform process in 1991. People here have relatively less experience of business situations. They are not ready to take risks on their own. It will still take time for common people to learn the technicalities of business and to start their own enterprises. Or people can be trained to come up as entrepreneurs. Studies and also history has shown that best results for innovation come after lot of experiments.

Start Ups

With the passage of time from early stage of human life, the thing which has changed is the technology used and innovation. Fire and wheel are the most revolutionary innovations for humanity. Since then human being have been discovering more technologies to make human life more comfortable. The rate of use of new technology is very fast and the rate of becoming a new technology an obsolete one is even faster. So for starting a new venture in this fast changing world of technology, one has to be dependent on innovations and technology. In order to maintain the identity of a new business and to sustain the competition in the market , either one has to launch new unforeseen products altogether or they have to keep on adding some value additions to the products already available in the market. Otherwise new entrant will be thrown out of the market. For any new technological startup there are thousands of hurdles in initial phase and billions in the long run. It is not easy to give a new idea and apply it to the business. Before bringing any new innovation in to action, there are many hurdles that come in their way but people with a great vision, strong determination and unique & positive management always come up with these hurdles and set standards for others and themselves. Any new technology had many threats like whether it will be adopted by the people or not? Whether it is a right move to introduce this technology or not? People really want this or not? What other things people can demand? Whether we are working on right direction or not? Whether we will able to make profit in long run? And many other questions arose for any business entity.

After making a successful debut in the market business cannot be left dependent on market forces. To be in the competition business has to keep on giving new products, with innovative features, to the market. Otherwise some other will take this advantage. Customers don't want to use same thing for a long time. After need change very frequently, and the organization which keep on fulfilling their demand, becomes an successful organization. There is nothing like you once give a good product with innovative features and latest technology and will keep on reaping the fruits of it for whole life. An entrepreneur have to continuously come up with something new , something different, which makes life of customer easy and comfortable.

Existing Businesses

The existing firms also supposed to deliver new, better and innovative products time to time.

Today is the era of competition. It can be within the products of same organization. Positive cannibalization is common now. That means if one product is not doing well in the market then company will launch another product with all the earlier features and some

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value additions. These value additions will be to make product look different. Again it requires innovation. Take example of Tata Nano. Tata thought of a car for Rs one lakh. The only idea of making a car like Nano is an innovative one. Middle class people who are not able to buy Maruti 800 will now be able to buy Nano. Producing an engine for Rs 15000 is a challenging job.

But the engineers and managers at force in Tata made this possible only with the help of innovation. Had it not be there, it would not have been possible to reduce cost of the car to this extent. In the same way most of the big companies like Nike, IBM, Apple and many more are following the same suit. The idea is simple. Just add one or two features at every level of production and in the end you will get a product with more than 50 added features. But for that one or two features innovation is required and managers in an organization take care of it. From the market survey, responses from dealers and customers an intelligent manager will get the idea of features required to be added to the product.

The Innovation Process

Innovation is not a blueprint process that can be entirely planned at the beginning. To prevent going through the same never ending cycle without making any real progress but at the same time not omitting any essential steps to shorten time to market, a systematic and disciplined process approach is essential.

Part of this approach is to phase the process and to define specific milestones at which certain decisions are to be made. Within each phase certain information needs to be gathered before the next phases can be entered. The following phased are commonly used in innovation literature:

1. The pre-project phase
2. The development phase
3. The implementation and commercialisation phase

In order to innovate successfully freedom is required. Too many rules and regulations will kill innovation. However, innovation also requires a systematic and disciplined approach. In other words, innovation is balancing between chaos and structure. Especially in the early phase, i.e. the pre-project phase, freedom is quintessential. Further on in the innovation process freedom will gradually be more and more restricted.
In the scheme below we illustrate the innovation funnel, divided into the three phases as mentioned above and separated. The first part of the funnel is called the pre-project phase or "fuzzy front end". This phase can be subdivided into three sub phases:

1.1 The idea generation phase
1.2 The conceptualisation phase, which results into
1.3 The feasibility and project planning phase

At the end of the idea generation phase a first selection of ideas is made. Only a small number of ideas will be developed further. Next to making a technical model for these ideas, it is common to also develop customer and market models as soon as possible. The technologies and competences needed to make these ideas work are identified and checked against the technologies and competences available within the organisation. Thus, resulting in a competence gap analysis.
In addition a competitor analyses is made together with the first draft of a revenue and business model. Finally, expected costs, revenues and risks are identified.

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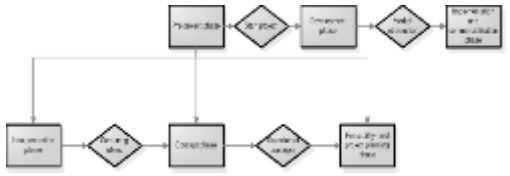
Based on available expertise and quantitative data the viability of the idea is estimated. Does the idea have enough potential to be further developed? All assumptions are made explicit and all activities required to test these assumptions are described in a project plan. Summarizing, the end result of the pre-project phase is a business case which gives the justification for further development in combination with a business or project plan.



Managing the Innovation

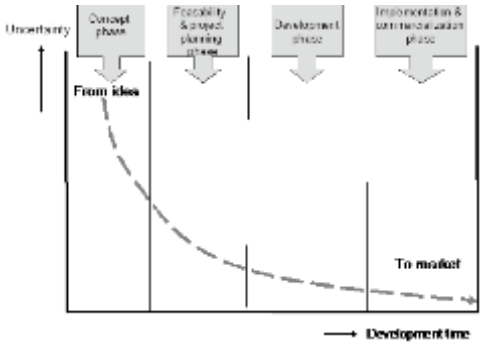
When we start with a business idea uncertainty is at a maximum. While developing the idea many ideas are discarded because they turn out to be technically infeasible, commercially unattractive or not profitable. Research has shown that out of one hundred ideas only one to ten actually make it to the market. After market introduction only half of the introduced ideas meet their original expectations

Management of Innovation = Management of Uncertainty: uncertainty and mortality curves

It is important to identify and investigate as soon as possible all the technical, market and organisational aspects involved in the feasibility and conceptualisation phase itself. Already at an early stage those parameters have to be identified that are the most important when deciding whether to terminate or to continue the innovation process. When the values of these parameters tend to push the decision towards a no-go decision it becomes necessary to investigate the level of uncertainty of these parameters. As a next step, it needs to be investigated if, where and how the necessary information can be gathered to reduce the uncertainty of these parameters.

When the chance of success is expected to be high, all the important parameters are positive and can be sufficiently founded, the project can be taken into the next phase, i.e. the development phase. During the development phase the objective is to systematically eliminate the technical and market uncertainties as much as possible. It is common practice to plan the most decisive, quickest and least expensive tests at the beginning of the development process and to move the most costly and time-consuming development activities backwards. Yet, some uncertainties can only be assessed after the implementation and market introduction of the innovation.

It is important to be prepared for all possible outcomes of the innovation process and to assure a flexible response to each outcome. This is an important aspect of entrepreneurship. The presence of sufficient entrepreneurship often plays a critical role in the early market introduction phase, he phase in which the business needs to be truly developed.



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Ideas can come from any part of the organization. Be it manager, be it peon, be it the top brass of a company. Good companies always respect ideas irrespective of the person giving the idea. The problem is not that there are not ideas, but there is no management of ideas. Like any other thing ideas can also be managed. A manager can give an idea which is not required today but can be very much helpful on any other good day. It is useful only when right idea come at right time. But it is simply not possible always. So there is a need of management of ideas.

No one even considered the possibility that someday Yahoo! search can generate the type of revenue that Google generates, and possibly take on Google on the core search business that it owns a majority market share by a long shot. Yahoo let its employees and managers think out of the box. They came up with lot many innovations. They managed the ideas better than Google and relegated it to the second position.

Creating Innovation and Entrepreneurship in Managers

For an existing firm their most valuable asset is their employees, especially managers. These people need to be nurtured in order to keep them able to give new ideas for continuous improvement. The employees need to be focused and communicated well what is expected out of them. Any idea, be it from any level of the management should be welcomed. The first step to innovation is to value those who can contribute to this process. Innovation is not a one day job rather it is an everyday activity.

Everyday Innovation

People typically associate innovation with the introduction of a new product or service. While this kind of innovation gets the headlines, innovative ideas applied to everyday problems can have just as much business impact.

Consider how top fashion companies like Gucci and Burberry are working hard to better manage their supply chain. One critical problem is replacing dud collections before retailers grow antsy. Burberry has spent more than $100 million to improve its ability to ensure that the right products get to the right stores at the right time.

These challenges of course require a fair amount of blocking and tackling, but there's also ample room for fresh, innovative thinking. E.g. Considering the top- and bottom-line impact of finding better, cheaper, and faster ways to get products into stores more quickly.

Innovation is all about solving old problems in new ways. Human resources or information technology workers can think of new ways to help internal customers solve the problems they face. Process-focused managers can develop ways to have their processes run better, faster, and cheaper. Customer-focused employees can find new ways to provide positive experiences to customers. And on and on.

The following questions are a good starting point for any innovation effort:

- What is an important problem that the customer, or internal client, can't adequately solve?
- What stops the customer, or internal client, from adequately solving the problem?
- How can you make it easier and simpler for the customer, or internal client, to address the problem?

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- What is a low-cost way to test your idea?

Innovation doesn't have to land in the headlines to have impact. Everyday innovation can be critical to long-term business success.

How to Manage Innovation?

Innovating continuously is a challenging task for an enterprise. And in this challenge the most important part that is played is by its employees. Innovation mostly requires change in the organization towards which the employees are resistant. The large companies manage innovation by forming groups and aim at making its employees risk takers as Innovation is the only survival in today's businesses.

Teaming Up To Crack Innovation and Enterprise Integration

When a company is continuously creating new generations of products, services, and business processes, it requires seamless collaboration across its firm's different parts. But in most large corporations, innovation and integration are unnatural acts. Resistance stifles new ideas, and silos block cross-functional cooperation.

Yet some companies are overcoming these boundaries by establishing two new types of cross-organizational teams.

Distributed innovation groups (DIGs) foster innovation throughout the company. For example, they deploy intranet-based forums and wikis to scout for promising ideas.

Enterprise integration groups (EIGs) establish the architecture and management practices essential for business integration. For instance, they identify integration opportunities, channel resources to them, and reconfigure ERP systems to support ever-tighter cross-business collaboration.

To establish each of these groups, select a small number of talented people who combine broad business knowledge, technology expertise, and the social skills needed to build relationships both within and outside your company.

How Distributed Innovation Groups Work

DIGs foster innovation by:

- Scouting for high-potential ideas. Group members take part in brainstorming and problem-solving sessions, identify customer needs that could lead to new offerings or business models, and consider how to use existing technologies in new ways.
- Scanning the environment for emerging technologies and their applications. DIGs research technology trends and monitor early adopters' experiences for insights into new applications.
- Facilitating online idea marketplaces. They use information dissemination and collaboration technologies, including groupware, social-networking systems, and Web 2.0 tools such as wikis and blogs.
- Advising business units. They counsel unit leaders on how to manage innovation initiative portfolios and how to conduct rapid prototyping.
- Publicizing promising innovations and their progress throughout the enterprise. This sparks creativity by example.
- Serving as a home for developing pilot projects and prototypes. If a business unit comes up with a promising idea

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but lacks the resources and skills to develop it, the DIG can provide the extra push needed for the idea to gain early traction.

- Example: Royal Dutch/Shell's "GameChanger" teams provide seed funding for radical or long-term innovations that would otherwise be orphaned. GameChanger coaches organize idea-generation workshops and help idea originators prove the concept (in a lab or in the field). Resulting innovations have included a new bio fuel and a process for extracting hard-to-access gas reserves.

How Enterprise Integration Groups Work

EIGs foster business integration by:

- Providing expertise in process management and improvement. Groups oversee activities such as Six Sigma and disseminate best practices across the enterprise.
- Providing staff to major business-integration initiatives. EIGs provide whatever skills may be lacking in terms of process thinking and design, organizational change, job retraining, and new performance metrics.
- Managing enterprise architecture. They configure and manage the evolution of the company's business processes, information, and technology.
- Anticipating a more integrated future. EIGs help managers envision and prepare for the ramifications of horizontal integration.
- Example: General Electric's "Corporate Initiatives Group" is responsible for horizontal integration within and across GE's six major business units. Benefits include reduced cycle time for key business processes. One GE Company that provided private-label financing for retailers used to take 63 days from contract signing until a customer was allowed to finance a purchase. With the Group's help, that time was reduced to one day, speeding revenues to the company. The Group also shares best practices across the corporation, especially those involving accelerating growth, reducing waste, and improving customer-facing processes.

Mapping Your Innovation Strategy

Mostly companies tackle new growth without a game plan. Instead, they reuse old growth strategies that worked in the past. Or they fumble to figure out markets that might welcome the technologies incubating in their labs. Consequently, the plays that worked so well previously are no longer effective. And hit-or-miss efforts to force new growth often spawn costly innovation failures.

Yet they can innovate better, faster, cheaper. How?

Here are few steps: Develop and execute an innovation game plan. Pick your playing field—markets where the best opportunities are hiding and where you can play to your strengths. Analyze major innovations in those markets to identify criteria your opportunity must meet to succeed. Develop a strategy for ensuring that your project meets those criteria. And fund the project conservatively at first, to force your innovation team to learn and adapt as it moves forward. Innovation won't ever be completely predictable. But the game has to be played systematically instead of relying on trial and error method to spur new growth.

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Pick Your Playing Field

You face a bewildering array of possible markets for innovation. To narrow your choice, aim for markets lying somewhat out of—but not too far from—your core business. Find customers using existing products in unusual ways or using products for things they weren't designed to do. These behaviors signal the need for innovations.

Example: Software provider Intuit noticed that small business owners were using its personal financial software package because they liked its simplicity, compared to more complicated offerings designed for small businesses. Intuit optimized the program for these customers, branded it QuickBooks—and quickly dominated the product category.

Identify Success Criteria

Analyze major innovations in your targeted market's history to identify common elements shared by successful offerings.

Example: A consumer health care products company had identified at-home diagnostics as a key growth area. By analyzing the history of home diagnostics (pregnancy kits, blood glucose monitors), it identified eight characteristics shared by successful innovations. These included: diagnosing the condition is currently difficult, inconvenient, or expensive; competitors have difficulty duplicating the product; and the company could effectively communicate the innovation's benefits to target consumers.

Develop your Own Innovation Game Plan

Assess your innovation opportunity against the success criteria you identified. Brainstorm ideas for ensuring that the opportunity meets the criteria.

Example: Procter & Gamble wanted to bring a leading brand to China. Success criteria included low cost but "good enough" performance. Yet stripping out functionality to lower costs would annoy demanding consumers—not a criterion for success. P&G's plan? Start in smaller Chinese cities, where consumers would embrace limited first-generation products because no legitimate alternatives existed. After resolving the inevitable kinks in producing such a low-cost product and improving quality, P&G would take the offering to larger cities.

Execute And Adapt

All innovations unfold in unpredictable ways. To boost your chances of success, follow the principle "Invest a little, learn a lot."

Example: Teradyne, a semiconductor test equipment maker, saw an opportunity to create smaller, cheaper, and easier-to-use machines. The CEO demanded that the innovation team achieve early profitability before he invested significantly in the project. This requirement forced the team to find a foothold market they could attack quickly: manufacturers who produced inexpensive commodity semiconductors that perform basic computations in household appliances. These manufacturers—who couldn't previously afford Teradyne's offerings—loved the new product. It took off, creating a substantial growth business for Teradyne.

How We Create Opportunities?

In today's scenario it has become

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important for every business to gain competitive edge by continually innovating. In order to sustain in the competition the organizations can create opportunities to innovate in terms of new products development, better services and process improvements. Out of these three, process improvement is the most difficult task. For gaining competitive edge in the terms of process improvement the companies today focus on using new and improved technology for increasing their revenues and profits. For example Toyota has done immense cost cutting by improving its processes by implementing Just-in-Time technique. It took Toyota at least 20 years to implement this technology and today it is at no.1 position worldwide, leaving General Motors behind. Today, more and more companies are focusing on improving their processes.

Managing High Technological Startups

In this globalised era, every second a new technology is born and many become obsolete. In starting a new technological venture, one may have an initial advantage. To sustain it one has to constantly scan the environment and take early steps to take advantage of it. There are a numbers of hurdles which can outpace vision, as product life cycle become short, so companies have to constantly create and innovate with hunger (new technologies processes). The first mover advantage is of paramount importance in such a changing scenario but may be for a short time.

When there would be no innovation then that will be the last day for mankind. Change is a natural process. One can't stop these technological innovations but yes decide whether to act as innovator or spectator. All efforts are to be made which makes life simple and more luxurious. Whole growth span can be divided in three phases. Initially it was agricultural revolution, in this phase all the emphasis created economies that used all their efforts for more & more grains and crops by the help of technology and machinery. After this, people saw industrial era that created high production standard in the field of machinery, products and other utilities that went for higher level of Maslow's hierarchy by innovating gigantic machines as well as ultra small machines that made life more simple and more controlled. Last but not least, "Dot com" era, which shrank the whole world into one click distance. People could share their knowledge, ideas, feeling expression, assets and their business. A new term named as globalization came into the picture.

What changed the way that early man was living to a more sophisticated human being of 21st century, simply we can say innovation and technology. Everyday a new technology born, that eats an old technology, converts some hidden demands or desire of people into reality. It is era of the positive cannibalization. So bottom-line is that all efforts focusing on customer and their needs. This is just like an open system. System self regulates itself, always dynamic, inertia ensures its flow of change. For any new technological startup there are thousands of hurdles in initial phase and billions in the long run. Managing any innovation is never being easy for any iconoclast. There are many hurdles that come in their way but people with a great vision, strong determination and unique & positive management always come up with these hurdles and set standards for others and themselves. Any new technology had many threats like whether it will be adopted by the people or not? Whether it is a right move to introduce this technology or not? People

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really want this or not? What other things people can demand? Whether we are working on right direction or not? Whether we will able to make profit in long run? And many other questions arose for any business entity.

A new technology startup may have initial advantage because this starts a new work based on new technology that provides something extra that people wants. An initial advantage can be lost if other competitor worked more efficiently or introduce a new system that just outpace your business from the market. In this globalised and intensively competitive world as product life cycle is very short at every phase you must have something more or extra to deliver to the customer. Like what happened with pager companies? They were not able to think beyond messaging and mobile technology thrown them out of the market. But in this dynamic market and intense competitive world managing any technological company in initial and later stage is like walking on a double edged sword, because your success is relative. To be successful when other competitors are sleeping you must cover a long way. A proactive approach is needed. No fixed strategy would work out. You should be flexible to overcome the stress and strain due to dynamic environment.

Let's try to visualize problem other than previously discussed. Let's move into the heart of the topic "Managing High Technological Startups". Initially a high technology setup demands high investment on research and development. Any technological startup firm cannot even dare to think about cutting funds from its research and development. Companies like Cipla, Dr.Reddy, Honda and all big guns investing billions of rupees for just this part. Because your success tale can become a learning experience for other companies that what should not to be done if you are thinking for a high technological startup. Money is now not problems at all; there are many venture capitalists and other angel broking firms that are just dying for investing on your idea. But yes gathering, managing and updating those resources is the toughest task. Resources for any high technological startup are their "knowledge worker", zeal to excel and their vision. These are the special people with great experience, intelligent mind to think many steps ahead than other people. Any new technological startup needs special support in the HR, accounting, legal and office management. No single company can manage all the things in a most efficient manner so it is advisable for outsource the activities in which you are weak and focusing on those activities in which you are specialized. Ignorance can fail your efforts so creating awareness about your service is also a great matter of concern for any new player. Marketing and advertisement sense the public's feedback so that company or organization can work accordingly. Big goal is a good thing but those should have some rationality with them.

For instance Google, Wikipedia & technological companies initially have a unique idea that can serve general masses purpose of fast search engine, so they went with good quality workforce highly motivated, best brains, highly skilled in their domain. Any technological startup faces a serious challenge by recruitment of workforce. Neither can they go for a complete experienced workforce nor with a totally young workforce. Both have certain plus and minus. As life-long employment fades and the workforce becomes increasingly mobile, many companies look to hire

skilled, experienced workers to improve productivity quickly. Those workers, however, often bring baggage from prior jobs that can negate the benefits of their prior experience, Companies might be better off investing in training fresh recruits with little experience in an industry so the companies can have more control over how the new workers adapt to their new employer's corporate strategy and culture. The research found that training may be more productive than paying a premium to hire experienced workers who might come from a different sort of corporate environment.

A new employee can bring many unexpected problem. Adaptability of a new employee is always a matter of great concern. A balance workforce proportion is needed so that the resource would be efficient as well as economic. They first try to satisfy their own employees or workforce so that these motivated and innovative people can work in a better environment. Bureaucracy could slow down their growth so they worked with flexible strategies that framed in such a way that allowed mutual growth of these companies as well as their employees. Infosys's Narayan murthy said a very good thing about their strategy that their first customers are their employees. As we know any business is an open system, so employee's mood can affect the work performance. Research showed that a mentally neutral and balance person can do the job in most efficient manner. Thus a wise manager of any technological startup must try to help employees cope with mood-affecting influences in their private lives including advising employees on how to best handle commuting hassles or offering counseling for family problems. Management should try to retain their middle manager because they act as glue between top management and workforce.

Because as if there will be no one for applying strategies there will be no use of creating strategies by management. They should work in such a way that not only try for creating technical solution but try to create a total solution. First they should create a blueprint of their organization and working and then work accordingly. Few companies used centralization whereas few prefer decentralization. There are many structures like departmental structure, matrix structure and many more. Cross functional teams can also be a good solution for better management and working. Formation of alliances that can make more value for all companies as well as customer. Like what NIKE, IBM and other good companies doing? they just adds some value at one point then transfer it to other point that adds some more value either within the organization or outside the organization and process goes on till final product is ready for the market.

So, it is very important that company should transform and evolve their structure in best suitable way. A proper framework can be deciding factor of the success of any organization. Management should try to create a proper way of developing the organizational behavior that does not create grievances in workers. Leadership should be positive. In the highly competitive world any technological want the optimal resources allocation so that they can maximize their profit margin that can only be done with proper division of labor and specialization of work, delegation of work and power ,economies of scale and virtual networking are ways by which any technological startup can put itself at zenith.

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Innovation Index

Every year firms or nations or states spend millions of dollars on research and development. They keep a track of money spent on it but companies faces problems when it come to find out the output the money spent on research. Research may or may not come up with a positive result. Research is some sort of experiment. You may get the desired result in the end or you may end up with all money gone nowhere. We have many examples of hyped-up innovations that have failed after launch - Motorola's satellite phone foray or Project Iridium (although Motorola came back with a bang with Moto Razr cell phone), General Motors' Electric concept car (which is being reborn for a new launch), and Microsoft's MSN Search (which has been reborn into Live Search). One thing is certain: Top Innovators do not stop innovating on account of failed innovations. Rather, failure is part and parcel of their creativity and innovation initiatives, and many a times, failure is a good thing. True Innovators find a way to learn from their failed experiments, and come out stronger. GE CEO Jeff Immelt agrees with P&G CEO A.G. Lafley on the core principles that drive growth and innovation. He states: "It's important to make growth a process...Just like A.G (Lafley), I want a pipeline of innovation. Some projects will fail. But the goal for a company like ours or P&G is using size as an advantage. Most people just assume that big companies are slow and lethargic, and only a small company can grow. But if you get good processes, you can make size an advantage."

So how does one measure business innovation success? Can it be measured by a qualitative measure that can somehow gauge the emotional and psychological impact the innovation produces on the users (the "AaHa" moments), or a quantitative measure corresponding to the total population of end users using the new innovation (and even helping co-create it), or a financial measure in terms of net new revenue generated for the company that can be attributed to the new innovation? An innovation is only successful if the product or service is able to find and attract new customers who adopt and adapt to it, live by it, talk about it, and refer others to it; ultimately, the innovation must result in substantial new business for the company.

The Innovation Index is a compilation of the top Innovators in respective nation. Most of these Innovators are usually prestigious companies including GE, 3M, HP, IBM, and Proctor & Gamble who have created numerous innovations and shaped our lives over the past fifty plus years; some leaders are better known by their innovative product brands - Blackberry by Research In Motion, iPod and iMac by Apple, online shopping by Amazon.com, Windows and Office by Microsoft, Microprocessor powered by Intel; the list also includes leaders whose creativity and brands have become synonymous to markets: networks by Cisco, computers by Dell, marketplace of traders by eBay, hot coffee and cappuccino by Café Coffee Day, Making communication easy and making mobiles too cheap and loaded with latest features by Nokia, , lowest price shopping by Big-Bazaar, More, Spencer, low airline fares by Air Deccan, Go Air, Spice-Jet and others, Search engines ,which made every information available at the clicks of mouse, search nirvana by Google, Yahoo etc. List is endless and so are the innovations. The innovations which we take as just granted needs lot of creativity, experience, monetary expenses and over all long time. We, as general public, come

to know only about those innovations which succeed and which are able to make great impression. But there are many other experiments also which every economy, firm; nation conducts which gives no result as such. Lot of money has been spent on these projects which goes unnoticed by us.

Oregon's Innovation Index

Some of the countries have recently started their own innovation index like any other index as indicator of growth and they use various parameters for it. Taking as example "Oregon Innovation Index" of United States of America. The Oregon Innovation Index was created to measure the state's innovation economy and identify opportunities for enhancing competitiveness. The first Oregon Innovation Index, published in 2004, evaluated 9 indicators (see appendix) to track Oregon's progress. In 2005, Oregon's Governor and Legislature created the Oregon Innovation Council (Oregon Inc.), charging the council with developing an innovation-based strategy to grow Oregon's economy. The council identified the key factors necessary for a healthy innovation economy, including: public-private partnerships for research and development, ready access to capital, statewide entrepreneurial networks, and targeted investments in emerging industries where Oregon has a global competitive advantage. The council also emphasized the importance of ongoing measurement to track the performance of innovation initiatives as well as the overall health of Oregon's innovation economy. In 2007, Oregon increased the number of indicators from 9 to 20 to ensure that each stage of process and environment that leads to innovation is being measured.

"Anything that can be measured, can be managed"

-Peter Drucker

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SURYADATTA

Forest Resources – An Ideal Alternative for Tribal Development and Health Care

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Introduction

The Indian sub-continent is inhabited by 53 million tribal populations belonging to over 550 tribalcommunities that come under 227 linguisticgroups. They inhibit varied geographic andclimatic Zones of the country. Their vocationranges from hunting, gathering, cave dwelling nomadic to societies with settled culture living incomplete harmony with nature. Forests have beentheir dear home and totally submitted themselvesto forest settings. Their relationship with the forest was symbolic in nature. They have been utilizingthe resources without disturbing the delicatebalance of the eco-system. Tribal's thus mostly remained as stable societies and were unaffectedby the social, cultural, material and economicevolutions that were taking place with the so calledcivilized societies. But this peaceful co-existence of the tribal's has been disturbed in recent yearsby the interference in their habitats. Traditionalcommunities living close to nature have, over theyears acquired unique knowledge about the useof living biological resources. Modernisation, especially industrialization and urbanization has endangered the rich heritage of knowledge andexpertise of age old wisdom of the traditionalcommunities. A study on the utilization of local tribal's revealed that they hold precious knowledge on the specific use of a large number of agents of wild plant and animal origins, the use of many are hitherto unknown to the outside world. The tribal people are the real custodians of the medicinal plants. Out of 45,000 species of wild plants, 7500 species are used for medicinal purposes.

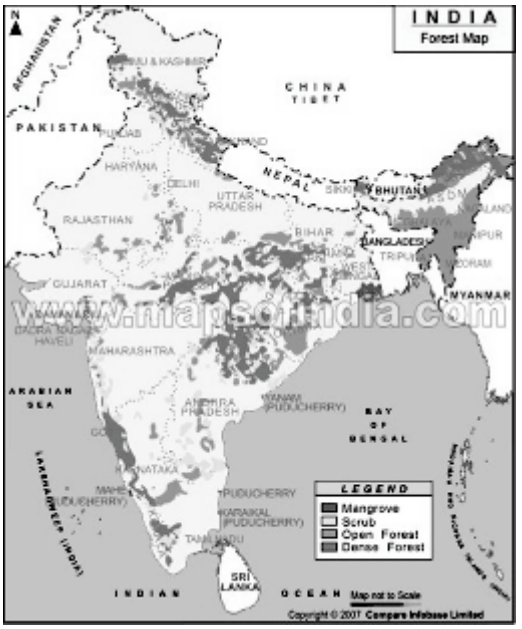

Fig Showing Forests Density on State Wise in India

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The World Health Organisation (WHO) has been promoting a movement for 'Saving plantsfor saving lives'. This is because of the growingunderstanding of the pivotal role medicinal plantsplay in providing herbal remedies to healthmaladies. India is the home of several importanttraditional system of health care like Ayurveda.

This system depends heavily on herbal products.Several millions of Indian households have beenusing through the ages nearly 8000 species ofmedicinal plants for their health care needs. Overone and half million traditional healers use a widerange of medicinal plants for treating ailments ofboth humans and livestock across the length andbreadth of the country. Over 800 medicinal plantspecies are currently in use by the Indian herbalindustry. However, barring some 120 species, allothers are collected from the wild. This collectionoften involves destructing harvesting when partslike roots, bark, wood, stem and the whole plant (herb) are used. Unregulated wild harvest, alongside habitat loss and degradation is leadingto resource depletion which in turn is endangeringthe very survival of these species. No wonder, many of these species listed in the red data book of the IUCN and the Botanical Survey of Indiaare valued for their medicinal properties.

The tribal people of Orissa have been inthe practice of preserving a rich heritage ofinformation on medicinal plants and their usage.

These people have faith in their traditional systemof health care and generally practice it. They have their own traditional physicians who use theseplants as their material medica. They have rich andoutstanding traditional knowledge and wisdomregarding material for healing of commonlyoccurring ailments. They have both the know-how and do-how for preparing the medicine and itsadministration. Unfortunately, this information isyet to be collected systematically andcomprehensively and maintained in databases ina manner they would help in protecting their IPR.

Herbal History and Tradition in Indian Context:

The Rigveda, the oldest document of human knowledge mentions the use of medicinal plants in the treatment of man and animals. Ayurveda gives the account of actual beginning of the ancient medical science of India, which according to western scholars was written between 2500 to 600 B.C. Charaka and Susrutawrote around 1000 B.C. Charaka concentrates more on medicine while Susruta deals with surgery in details along with therapeutics.After the invasion of India by the Greeks and Mohemmadans successively, the Indian system of medicine came to decline and no originalworks were then undertaken. During and afterthe British rule, there were two opinions, Onesupporting the rich treasure of knowledge ofIndian system of medicine and the other discardingit, calling it an old system based mainly onempiricism considering that this system hassurvived to such an extent the ravages of time, itcannot be brushed aside as "unscientific". It mightbe interesting to note that a large percentage, approximately 80% of the population of the worldstill relies on the old systems in some form or the other, and on the indigenous material medicinefor human and animal treatment, due to culturaltraditions and low buying capacity. When we combine this economic factor with provenefficacy,

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our herbal drugs stand out as the betterchoice for millions. History shows that many of our important pharmacopial drugs were known and were also used in some form or the otherpossibly long before they were introduced intothe western medicine and before their actionswere investigated on scientific lines.

Measures to conserve biodiversity have been taken in India since hoary past. Elements ofthis aspect of traditional wisdom can be gatheredthrough analytical studies of the ethnic societieswhich are less influenced by the modern civilizationand also byscrutinizing the ancient texts written in sanskrit, pali, Tamil, etc. The Vishnu samhita is one of such scripture in Sanskrit language. It appears that this work contains some directinstructions in connection with conservation of thebio-diversity.

According to the text of Vishnu samhita, causing any harm to the plant(s)/animal(s) is a sin.Even purloining of part(s)/ product(s) of any ofthese living beings is a crime. The sinner/criminal is liable to chastisement in this life and also afterdeath. The punishment are of diverse nature:- pecuniary, corporal, expiatory and donation ofspecific article (s) to Brahmins. ln this scripture there are some indirect instructions too, which canbe gleaned by analyzing the dietary regulationsand the use of bio-diversity in different religiousrites.

Traditional and folklore medicinebequeathed from generation to generation is rich in domestic recipes for common ailments.Traditional medicine encompasses protection andrestoration of health over millennia. The bestknown examples of Traditional medicine, differingin concept and protocol, are well developedsystems such as acupuncture and Ayurvedatreatments that have been widely used to sustainhuman health in India.

Developed countries, in recent times, areturning to use of herbal drugs and remedies.About 1400 herbal preparations are used widely, according to a recent survey in member states ofEuropean Union. Herbal preparations are popularand are of significance in primary health care inBelgium, France, Germany and the Netherlands.

Such popularity of plant derived products hasbeen traced to their increasing acceptance anduse in the cosmetic industries as well as to increasepublic costs in the daily maintenance of personalhealth and wellbeing. Examples of such beauty oriented therapeutically are skin tissue generators, anti wrinkling agents and anti-age creams. Alsoamong the poor, cures and drugs derived fromplants constitute the main source of health careproducts.

Despite the increasing use of medicinalplants, their future is being threatened bycomplacency concerning their conservation.Reserves of herbs and stocks of medicinal plantsin developing countries are diminishing severalimportant species are in danger of extinction as aresult of growing trade demands for safer and cheaper health care products and new plant based therapeutic markets in preference to moreexpensive targets-specific drugs and biopharmaceuticals.Such concerns have stimulatedaction in chronicling and conserving medicinal plants.

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SURYADATTA

Modeling from e-Learning for U-Learning

Gopal S Jahagirdar

Abstract

Despite increased research interest on knowledge transfer and knowledge management in academics, the field still lacks sound and holistic understanding of the key factors influencing knowledge transfer success and management of knowledge thus gained.

This paper presents attempts to provide a synthesis of existing theoretical perspectives and empirical findings related to the factors that facilitate or hamper knowledge transfer and attempts through mobile learning (M-Learning) success in information systems in academics. Ubiquitous learning is discussed at length. The data collection method is discussed and the key findings are presented. Researchers have gone through the various methods that were adopted for transferring the knowledge. Conclusion is drawn and further research is suggested.

Keywords: knowledge transfer, knowledge management, Information systems (IS), M-Learning.

Educational technology is not restricted to high technology and electronic educational technology, also called e-learning, has become an important part of society today, comprising an extensive array of digitization approaches, components and delivery methods. For example, m-learning emphasizes mobility, but is otherwise indistinguishable in principle from educational technology.

Educational technology includes numerous types of media that deliver text, audio, images, animation, and streaming video, and includes technology applications and processes such as audio or video tape, satellite TV, CD-ROM, and computer-based learning, as well as local intranet/extranet and web-based learning. Information and communication systems, whether free-standing or based on either local networks or the Internet in networked learning, underlie many e-learning processes.

Educational technology refers to the use of both physical hardware and educational theoretic. It encompasses several domains, including learning theory, computer-based training, online learning and, where mobile technologies are used, m-learning.

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Accordingly, there are several discrete aspects to describing the intellectual and technical development of educational technology:

- educational technology as the theory and practice of educational approaches to learning
- educational technology as technological tools and media that assist in the communication of knowledge, and its development and exchange educational technology for learning management systems (LMS), such as tools for student and curriculum management, and education management information systems (EMIS).
- The extent to which e-learning assists or replaces other learning and teaching approaches is variable, ranging on a continuum from none to fully online distance learning.

A variety of descriptive terms have been employed (somewhat inconsistently) to categorize the extent to which technology is used. For example, 'hybrid learning' or 'blended learning' may refer to classroom aids and laptops, or may refer to approaches in which traditional classroom time is reduced but not eliminated, and is replaced with some online learning. Collaborative learning is a group-based learning approach in which learners are mutually engaged in a coordinated fashion to achieve a learning goal or complete a learning task. With recent developments in smartphone technology, the processing powers and storage capabilities of modern mobiles allow for advanced development and use of apps. Many app developers and education experts have been exploring smartphone and tablet apps as a medium for collaborative learning. A virtual classroom provides the opportunity for students to receive direct instruction from a qualified teacher in an interactive environment. Learners can have direct and immediate access to their instructor for instant feedback and direction. The virtual classroom provides a structured schedule of classes, which can be helpful for students who may find the freedom of asynchronous learning to be overwhelming. A virtual learning environment (VLE), also known as a learning platform, simulates a virtual classroom or meetings by simultaneously mixing several communication technologies. In higher education especially, a virtual learning environment (VLE) is sometimes combined with a management information system (MIS) to create a managed learning environment, in which all aspects of a course are handled through a consistent user interface throughout the institution. E-learning authoring tools are software or online services that enable users to create courses, simulations, or other educational experiences. These tools typically support conventional, presentation-like courses, and may enable screen recording, multimedia, interactivity, quizzes, and non-linear or adaptive approaches. A learning management system (LMS) is software used for delivering, tracking and managing training and education. For example, an LMS tracks attendance, time on task, and student progress. Educators can post announcements, grade assignments, check on course activity, and participate in class discussions. Students can submit their work, read and respond to discussion questions, and take quizzes. A learning content management system (LCMS) is software for author content (courses, reusable content objects). An LCMS may be solely dedicated to producing and publishing content that is hosted on an LMS, or it can host the content itself. Effective

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technology use deploys multiple evidence-based strategies concurrently (e.g. adaptive content, frequent testing, immediate feedback, etc.), as do effective teachers. Pedagogical elements are defined as structures or units of educational material. They are the educational content that is to be delivered. These units are independent of format, meaning that although the unit may be delivered in various ways, the pedagogical structures themselves are not the textbook, web page, video conference, Podcast, lesson, assignment, multiple choice question, quiz, discussion group or a case study, all of which are possible methods of delivery. Using computers or other forms of technology can give students practice on core content and skills while the teacher can work with others, conduct assessments, or perform other tasks. Through the use of educational technology, education is able to be individualized for each student allowing for better differentiation and allowing students to work for mastery at their own pace.The use of educational apps generally has positive effect on learning. Pre- and post- tests reveal that the use of apps on mobile devices reduces the achievement gap between struggling and average students. According to Branford et al, "technology does not guarantee effective learning" and inappropriate use of technology can even hinder it.

New technologies are frequently accompanied by unrealistic hype and promise regarding their transformative power to change education for the better or in allowing better educational opportunities to reach the masses. Ubiquitous learning is often simply defined as learning anywhere, anytime and is therefore closely associated with mobile technologies. The portability of computers and computing devices has blurred the traditional lines between formal and informal learning. With the Internet and social media, using educational apps makes the students highly susceptible to distraction and sidetracking. Even though proper use has shown to increase student performances, being distracted would be detrimental. Another disadvantage is increased potential for cheating. Smartphones can be very easy to hide and use inconspicuously, especially if their use is normalized in the classroom. These disadvantages can be managed with strict rules and regulations on mobile phone use.

M-learning or mobile learning is defined as "learning across multiple contexts, through social and content interactions, using personal electronic devices." A form of distance education, m-learners use mobile device educational technology at their time convenience.

M-learning technologies include handheld computers, MP3 players, notebooks, mobile phones and tablets. M-learning focuses on the mobility of the learner, interacting with portable technologies. Using mobile tools for creating learning aids and materials becomes an important part of informal learning.

M-learning is convenient in that it is accessible from virtually anywhere. Sharing is almost instantaneous among everyone using the same content, which leads to the reception of instant feedback and tips. M-learning also brings strong portability by replacing books and notes with small devices, filled with tailored learning contents.

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U-Learning is an innovative connector of industry and academia, addressing individual and corporate skills gaps through professional flexible learning. ULearning is an innovative connector of industry and academia, addressing individual and corporate skills gaps through professional flexible learning. Ubiquitous learning (or u-learning) is equivalent to some form of simple mobile learning, e.g. that learning environments can be accessed in various contexts and situations.

The main characteristics of ubiquitous learning are the following:

- *Permanency:* Learners never lose their work unless it is purposefully deleted. In addition, all the learning processes are recorded continuously every day.
- *Accessibility:* Learners have access to their documents, data, or videos from anywhere. That information is provided based on their requests. Therefore, the learning involved is self-directed.
- *Immediacy:* Wherever learners are, they can get any information immediately. Thus, learners can solve problems quickly. Otherwise, the learner can record the questions and look for the answer later.
- *Interactivity:* Learners can interact with experts, teachers, or peers in the form of synchronies or asynchronous communication. Hence, the experts are more reachable and the knowledge becomes more available.
- *Situating of instructional activities:* The learning could be embedded in our daily life. The problems encountered as well as the knowledge required are all presented in their natural and authentic forms. This helps learners notice the features of problem situations that make particular actions relevant.
- *Adaptability:* Learners can get the right information at the right place with the right way.

Advantages of Mobile Learning Transfer

- Ownership lies with the student, depending upon the capacity and affords or capacity student can bear the cost.
- For paperless office, this model suits as it reduced the cost of printing and there by stationery and wastage.
- Teacher can circulate notes, presentations, questions bank, photos, etc.
- Every teacher can exchange and share their question banks; students also can share the material.
- No need to take photocopy or any documents as it is available on mobile.
- Teacher and students can share their material, notices, and circulars without student present physically in the premises.
- With Wi-Fi members can upgrade the device.

Disadvantages includes

- Requires Standardization, which itself is a challenging task.
- Students may defuse the questions or spoils the questions bank.
- All the member, teacher or students, needs have mobile device.
- Roles need to be decided by the authority or administrator which in itself is a challenge.

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Conclusion

A student-learning centered view of transfer embodies these four characteristics. With this conception, teachers can help students transfer learning not just between contexts in academics, but also to common home, work, or community environments. Knowledge transfer in the fields of organizational development and organizational learning is the practical problem of transferring knowledge from one part of the organization to another (or all other) part(s) of the organization.

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SURYADATTA

Development of Hospitality and Tourism in India

Sudha Vijay Nair

Abstract

India continues to move up and up day by day on the ladder of top tourist destinations which is preferred by the tourists all over the world. This is only due to India's colorful and rich heritage including the vast and interesting landscapes which is attracting tourists from around the world without any hindrance. As the tourists are increasing, the Indian tourism industry is also moving in the upward direction going by the inflow of foreign tourists in recent times which is on an increase from year to year. Initially there was a slow growth at the start of the millennium but during the last couple of years tourism has picked up momentum and has performed quite well. The tourism industry in India has been accorded as the status of "Export House "for the foreign exchange it is attracting which also leads to the economic growth of the country. Today the Tourism Industry in India has become one the most important sectors of the economy by contributing substantially in the country's GDP (Gross Domestic Product). Also the WTTC (World Travel and Tourism Council) has named India along with China as one of the fastest growing tourism industries for the next 10 to 15 years to come.

The organizations that are involved in the development of tourism at the Centre are Development of Tourism, Indian Institute of Tourism and Travel Management, National Council for Hotel Management and Catering technology, India Tourism Development Corporation Limited, Indian Institute of Skiing and Mountaineering and National Institute of Water Sports. The hospitality industry is a diverse industry with a powerful, common dynamic that focuses on the delivery of quality services and products and the customer/guest's impressions.

Key Words: Export House, Foreign Exchange, Momentum

The World Travel and Tourism Council (WTTC) has forecasted that Indian tourism sector shall grow at an annual average growth rate of 7 per cent over the next ten years. It has also been noticed by the Government that the Tourism and Hospitality Sector in India is gaining momentum on a daily basis and foreign arrivals are increasing at an alarming rate in all tourist spots in India namely Goa, Jaipur, Mount Abu, Kerala, Mysore and many more to add to the list. Also as per the update by Tourism and Hospitality Industry in India in March 2016, over

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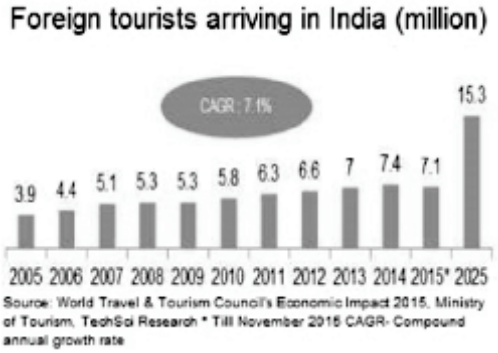
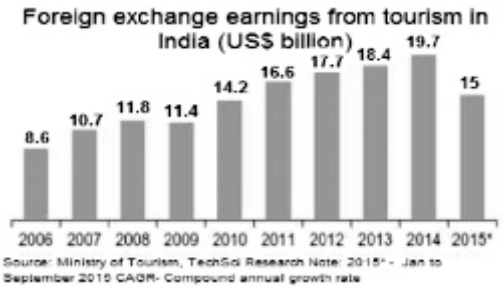
7.1 million foreign tourist arrived in 2015 from the period January 2015 to November 2015 and the rate by 2025 of foreign tourists arriving in India is expected to reach 15.3 million, according to the World Tourism Organization.



Foreign arrivals are rising and the foreign exchange is also increasing in India as per the below graph.

During January - September 2015, foreign exchange earnings from tourism were US$ 15 billion as compared to US$ 19.7 billion in 2014. Foreign exchange earnings increased at a CAGR of 10.9 percent during 2006–14.



Introduction

The word "tour" is derived from the Latin 'tornare' and the Greek 'tornos,' meaning 'a lathe or circle; the movement around a central point or axis.' This meaning changed in modern English to represent 'one's turn.' The suffix -ism is defined as 'an action or process; typical behavior or quality' whereas the suffix -ist denotes one that performs a given action. When the word tour and the suffixes -ism and -ist are combined, they suggest the action of movement around a circle. Therefore, like a circle, a tour represents a journey that is a round trip, i.e., the act of leaving and then returning to the original starting point, and therefore, one who takes such a journey can be called a tourist.

India is a developing country and is also one of the fastest growing economies in the world. Among the various services sector in India, the Indian tourism and hospitality sector has gained the importance as one of the most important sector as far as the growth among the other services sector in India is considered. The third-largest sub-segment of the services sector comprising trade, repair services, hotels and restaurants contributed nearly US$ 187.9 billion or 12.5 per cent to the Gross Domestic Product (GDP) in 2014-15, while growing the fastest at 11.7 per cent Compound Annual Growth Rate (CAGR) over the period 2011-12 to 2014-15. The tourism in India can ensure great potential taking into account the rich cultural and historical heritage and places of natural beauty spread across the country. Tourism if accounted for is also potentially a large employment generator besides being a significant source of foreign exchange for the country. There are numerous guides who are given opportunity to serve the tourists which also leads to employment of India youth.

It is expected that the tourism industry is expected to generate 13.45 million jobs! across sub-segments such as Restaurants (10.49 million jobs), Hotels (2.3 million jobs) and Travel Agents/Tour

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Operators (0.66 million). It is also with the help of The Ministry of Tourism which helps the industry to meet the increasing demand of skilled and trained manpower by providing hospitality education to students as well as certifying and upgrading skills of existing service providers. India has moved up 13 positions to 52nd rank from 65th in Tourism & Travel competitive index@.

Market Size. The number of Foreign Tourist Arrivals (FTAs) has grown steadily in the last three years reaching around 7.103 million during January–November 2015 (4.5 per cent growth).The number of FTAs in November 2015 was 8, 15,000 registering an increase of 6.5 per cent over November 2014.

Foreign Exchange Earnings (FEEs) from tourism during January-November 2015 was Rs 1, 12,958 Crore (US$ 16.94 billion), registering a growth of 1 per cent over same period last year.

The number of tourists arriving on e-Tourist Visa during the month of October 2015 reached a total of 56,477 registering a growth of 1987.9 per cent or ~21 times as compared to 2,705 tourists in October 2014. It is expected that the facility of online hotel bookings in India will double by 2016-17 due to the internet and smart phones facility.

Objective

To understand and promote and enrich tourism education in India and to create healthy interaction opportunities for tourists and locals and increase better understanding of different cultures, customs, lifestyles, traditional knowledge and believes.

Methodology

The methodology being used here is by referring case study, Chronicle year book 2008 and going through various websites and reference books.

Investments

If we compare the top sectors in India it is the tourism and hospitality sector which attract the highest Foreign Direct Investment (FDI). During the period April 2000-September 2015, the hotel and tourism sector attracted around US$ 8.48 billion of FDI, according to the data released by Department of Industrial Policy and Promotion (DIPP). Also with the visit of tourists from various countries, many companies have already invested in the tourism and hospitality sector like:

- Fairfax-owned Thomas Cook has acquired Swiss tour operator Kuoni Group's business in India and Hong Kong for about Rs 535 crore (US$ 80.3 million) in order to scale up inbound tour business
- US-based Vantage Hospitality Group has signed a franchise agreement with India-based Miraya Hotel Management to establish its mid-market brands in the country.
- Thai firm Onyx Hospitality and Kingsbridge India hotel asset management firm have set up a joint venture (JV) to open seven hotels in the country by 2018 for which the JV will raise US$ 100 million.

Government Initiatives

Looking at the increase in number of tourists in India every year, the Indian government has realized and has initiated several steps to make India a global tourism hub. Some of the major

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initiatives taken by the Government of India to give a boost to the tourism and hospitality sector of India include the following:

- The Union Cabinet has approved the signing of Memorandum of Understanding (MOU) between the Ministry of Tourism of India and the Ministry of Trade Industry and Tourism of Colombia in order to boost cooperation in the field of tourism between the two countries.
- The Central Government has given its approval for signing of a Memorandum of Understanding (MoU) between India and Cambodia for cooperation in the field of tourism with a view to promote bilateral tourism between the two countries.
- Ministry of Tourism has sanctioned Rs 844.96 crore (US$ 142 million) to States and Union Territories for developing tourism destinations and circuits during FY 2014-15, which includes projects relating to Product/Infrastructure Development for Destinations and Circuits (PIDDC), Human Resource Development (HRD), Fairs and Festivals & Rural Tourism.
- The Heritage City Development and Augmentation Yojana (HRIDAY) action plans for eight missions cities including Varanasi, Mathura, Ajmer, Dwaraka, Badami, Vellankini, Warangal and Amaravati have been approved by HRIDAY National Empowered Committee for a total cost of Rs 431 crore (US$ 64.7 million).
- Under 'Project Mausam' the Government of India has proposed to establish cross cultural linkages and to revive historic maritime cultural and economic ties with 39 Indian Ocean countries.

Road Ahead

The number of tourists is increasing day by day due to which the travel and tourism industry has huge growth potential. Also international students are coming to India to pursue their education which also has a direct effect on the foreign exchange of India. The tourism industry has also looked towards expansion of E-visa scheme to double the tourist inflow to India. The Rating agency ICRA Ltd had also estimated the revenue growth of Indian hotel industry to strengthen to 9-11 per cent in 2015-16. India is projected to be the fastest growing nation in the wellness tourism sector in the next five years, clocking over 20 per cent gains annually through 2017, according to a study conducted by SRI International.

Exchange Rate Used: INR 1 = US$ 0.015 as on December 17, 2015

Tourism and Hospitality in India

Impact of Tourism Industry in India

Though in India tourism has become one of the major sectors of the economy, contributing to a large proportion of the National Income and generating huge employment opportunities. Also it has become one of the fastest growing service industry in the country with great potentials for its further expansion and

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diversification. However, there are pros and cons involved with the development of tourism industry in the country.

Development of Tourism in India

Early Development

The first conscious and organized efforts to promote tourism in India were made in 1945 when a committee was set up by the Government under the Chairmanship of Sir John Sargent, the then Educational Adviser to the Government of India (Krishna, A.G., 1993). Thereafter, the development of tourism was taken up in a planned manner in 1956 coinciding with the Second Five Year Plan. The approach has evolved from isolated planning of single unit facilities in the Second and Third Five Year Plans. The Sixth Plan marked the beginning of a new era when tourism began to be considered a major instrument for social integration and economic development.

But it was only after the 80's that tourism activity gained momentum. The Government also took several significant steps. A National Policy on tourism was announced in 1982. Later in 1988, the National Committee on Tourism formulated a comprehensive plan for achieving a sustainable growth in tourism. In 1992, a National Action Plan was prepared and in 1996 the National Strategy for Promotion of Tourism was drafted. In 1997, the New Tourism Policy recognized the role of Central and State Governments, Public Sector Undertakings and the Private Sector in the development of tourism. The need for involvement of Panchayati Raj institutions, local bodies, non-governmental organisations and the local youth in the creation of tourism facilities was also recognized.

Present Situation and Features of Tourism in India

Today tourism is the largest service industry in India, with a contribution of 6.23% to the national GDP and providing 8.78% of the total employment. India witnesses more than 5 million annual foreign tourist arrivals and 562 million domestic tourism visits. The tourism industry in India generated about US$100 billion in 2008 and that is expected to increase to US$275.5 billion by 2018 at a 9.4% annual growth rate. The Ministry of Tourism is the nodal agency for the development and promotion of tourism in India and maintains the "Incredible India" campaign.

According to World Travel and Tourism Council, India is supposed to be a tourism hotspot from 2009-2018, having the highest 10-year growth potential. As per the Travel and Tourism Competitiveness Report 2009 by the World Economic Forum, India is ranked 11th in the Asia Pacific region and 62nd overall, moving up three places on the list of the world's attractive destinations. It is ranked the 14th best tourist destination for its natural resources and 24th for its cultural resources, with many World Heritage Sites, both natural and cultural, rich fauna, and strong creative industries in the country. India also bagged 37th rank for its air transport network. The India travel and tourism industry ranked 5th in the long-term (10-year) growth and is expected to be the second largest employer in the world by 2019. The 2010 Commonwealth Games in Delhi also significantly boosted tourism in India further.

Moreover, India has been ranked the "best country brand for value-for-money" in the Country Brand Index (CBI) survey

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conducted by Future Brand, a leading global brand consultancy. India also claimed the second place in CBI's "best country brand for history", as well as appears among the top 5 in the best country brand for authenticity and art & culture, and the fourth best new country for business. India made it to the list of "rising stars" or the countries that are likely to become major tourist destinations in the next five years, led by the United Arab Emirates, China, and Vietnam.

Tourist Attractions in India: *The tourists coming from all over the world to India is attracted due to the following:*

- For the treatment given by Indians to all visitors, no matter where they come from.
- Due to the traditions, varied life styles and cultural heritage and colourful fairs and festivals held is also a source of attraction to tourists.
- The beautiful beaches, forests and wild life and landscapes for eco-tourism; snow, river and mountain peaks for adventure tourism; technological parks and science museums for science tourism; centres of pilgrimage for spiritual tourism; heritage, trains and hotels for heritage tourism. Yoga, ayurveda and natural health resorts and hill stations also attract tourists.
- Indian handicrafts including jewellery, carpets, leather goods, ivory and brass work are some of the items which attract foreign tourists. It is estimated through survey that nearly forty per cent of the tourist expenditure on shopping is spent on such items.
- Medical tourism in India especially Kerala is also one of the fastest growing segment of tourism industry,

Initiatives to Boost Tourism: *For the economic developed of India, Government has also taken initiatives which includes:*

- Grant of export house status to the tourism sector and incentives for promoting private investment in the form of Income Tax exemptions, interest subsidy and reduced import duty.
- Also for foreign investment the hotel and tourism industry in India is given importance.
- Government has also simplified its rules as far as the grant of approval to travel agents, tour operators and tourist transport operators are concerned.

Future Prospects: *According to the latest Tourism Satellite Accounting (TSA) research, released by the World Travel and Tourism Council (WTTC) and its strategic partner Oxford Economics in March 2009:*

- The demand for travel and tourism in India is expected to grow by 8.2 per cent between 2010 and 2019 and will place India at the third position in the world.
- India's travel and tourism sector is expected to be the second largest employer in the world, which will be employing 40,037,000 people by 2019.Capital investment in India's travel and tourism sector is expected to grow at 8.8 per cent between 2010 and 2019.
- The report forecasts India to get capital investment worth US$ 94.5 billion in the travel and tourism sector in 2019.
- India is projected to become the fifth fastest growing business travel destination from 2010-2019 with an estimated real growth rate of 7.6 per

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cent.

Constraints: The major constraint in the development of tourism in India is the non-availability of adequate infrastructure including adequate air seat capacity, accessibility to tourist destinations, accommodation and trained manpower in sufficient number.

Poor visitor experience, particularly, due to inadequate infrastructural facilities, poor hygienic conditions and incidents of touting and harassment of tourists in some places are factors that contribute to poor visitor experience.

Impact of Tourism in India

Tourism industry in India has several positive and negative impacts on the economy and society. These impacts are highlighted below.

Positive Impacts

- *Generating Income and Employment:* Tourism in India is one of the main instruments for income and employment generation and for poverty alleviation and sustainable human development. It contributes 6.23% to the national GDP and 8.78% of the total employment in India. Almost 20 million people are now working in the India's tourism industry.

- *Source of Foreign Exchange Earnings:* One of the most important source of foreign exchange earnings in India is tourism which has an direct impact on the balance of payment of the country. The tourism industry in India generated about US$100 billion in 2008 and that is expected to increase to US$275.5 billion by 2018 at a 9.4% annual growth rate.

- *Preservation of National Heritage and Environment:* India has gained importance due to its historical national heritage and environment like the Taj Mahal, the QutabMinar, the Ajanta and Ellora temples, which is been preserved by the Tourism Department.

- *Developing Infrastructure:* Foreign tourists flowing into India has encouraged to develop the infrastructure that benefits the host community, including various means of transports, health care facilities, and sports centres, in addition to the hotels and high-end restaurants that cater to foreign visitors.

- *Promoting Peace and Stability:* Honey and Gilpin (2009) suggests that the tourism industry can also help to promote peace and stability in a developing country like India by providing jobs, generating income, diversifying the economy, protecting the environment, and promoting cross-cultural awareness.

Negative Impacts

- *Depletion of Natural Resources:* Increase in Tourism has an adverse effect on natural resources as consumption increases in areas where resources are already scarce.

  (i) Water resources: Water is used by tourism industry for hotels, swimming pools, golf courses and personal use of water by tourists which result in water shortages and degradation of water supplies and generation of waste water. In regions like Rajasthan where water is already scarce, the problem of water scarcity arises.

  (ii) Land degradation: The land resources like minerals, fossil fuels,

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fertile soil, forests, wetland and wildlife are being affected due to the increase in construction for tourists. Direct impact on natural resources, both renewable and non-renewable, in the provision of tourist facilities is caused by the use of land for accommodation and other infrastructure provision, and the use of building materials.

Forests often suffer negative impacts of tourism in the form of deforestation caused by fuel wood collection and land clearing e.g. the trekking in the Himalayan region, Sikkim and Assam.

- *Pollutio :* Tourism can cause the same forms of pollution as any other industry: air emissions, noise, solid waste and littering, releases of sewage, oil and chemicals, even architectural/visual pollution

(i) Air and Noise Pollution: Transport by air, road, and rail is continuously increasing in response to the rising number of tourist activities in India. Transport emissions and emissions from energy production and use are linked to acid rain, global warming and photochemical pollution. Air pollution from tourist transportation has impacts on the global level, especially from carbon dioxide (CO2) emissions related to transportation energy use. And it can contribute to severe local air pollution. Some of these impacts are quite specific to tourist activities where the sites are in remote areas like Ajanta and Ellora temples. For example, tour buses often leave their motors running for hours while the tourists go out for an excursion because they want to return to a comfortably air-conditioned bus.
Noise pollution from airplanes, cars, and buses, as well as recreational vehicles is an ever-growing problem of modern life. In addition to causing annoyance, stress, and even hearing loss for humans, it causes distress to wildlife, especially in sensitive areas.

(ii) Solid waste and littering: Waste disposal by tourists is a serious problem and improper disposal can be a major despoiler of the natural environment - rivers, scenic areas, and roadsides.
In mountain areas of the Himalayas and Darjeeling, trekking tourists generate a great deal of waste. Tourists on expedition leave behind their garbage, oxygen cylinders and even camping equipment. Such practices degrade the environment particularly in remote areas because they have few garbage collection or disposal facilities (www.gdrc.org/uem/ eco-tour/envi/ index.html).

(iii) Sewage: Construction of hotels, recreation and other facilities often leads to increased sewage pollution. Wastewater has polluted seas and lakes surrounding tourist attractions, damaging the flora and fauna. Sewage runoff causes serious damage to coral reefs because it stimulates the growth of algae, which cover the filter-feeding corals, hindering their ability to survive. Changes in salinity and siltation can have wide-ranging impacts on coastal environments. And sewage pollution can threaten the health of humans and animals. Examples of such pollution can be seen in the coastal states of Goa, Kerala, Maharashtra, Tamil Nadu, etc.

- *Destruction and Alteration of Ecosystem :* Ecosystem is a geographic area including all the living organisms (people, plants, animals,

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and micro-organisms), their physical surroundings (such as soil, water, and air), and the natural cycles that sustain them. Attractive landscape sites, such as sandy beaches in Goa, Maharashtra, Kerala, Tamil Nadu; lakes, riversides, and mountain tops and slopes, are often transitional zones, characterized by species-rich ecosystems. The threats to and pressures on these ecosystems are often severe because such places are very attractive to both tourists and developers. Examples may be cited from Krushedei Island near Rameswaram. What was once called paradise for marine biologists has been abandoned due to massive destruction of coral and other marine life. Another area of concern which emerged at Jaisalmer is regarding the deterioration of the desert ecology due to increased tourist activities in the desert.

Moreover, habitat can be degraded by tourism leisure activities. For example, wildlife viewing can bring about stress for the animals and alter their natural behavior when tourists come too close. Safaris and wildlife watching activities have a degrading effect on habitat as they often are accompanied by the noise and commotion created by tourists.

Conclusion

Tourism industry in India is growing and it has vast potential for generating employment and earning large amount of foreign exchange besides giving a fillip to the country's overall economic and social development. But much more remains to be done. Eco-tourism needs to be promoted so that tourism in India helps in preserving and sustaining the diversity of the India's natural and cultural environments. Tourism in India should be developed in such a way that it accommodates and entertains visitors in a way that is minimally intrusive or destructive to the environment and sustains & supports the native cultures in the locations it is operating in. Moreover, since tourism is a multi-dimensional activity, and basically a service industry, it would be necessary that all wings of the Central and State governments, private sector and voluntary organisations become active partners in the endeavour to attain sustainable growth in tourism if India is to become a world player in the tourism industry.

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