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# A Study of Factors Affecting YouTube SEO in 2020

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## **Abstract**

YouTube is the most successful online video sharing platform. Millions of users come on this platform to see informative, funny, motivational etc. videos. There are millions of creators present on this platform who make videos on similar topics. Thousands of videos are available on this platform on the same topic. When viewers search on YouTube regarding their query, they will see only a few videos on the first search result page. Videos on the first page gain most of the views. Hence it is important to be at top rankings of the first search result page. Search Engine Optimization (SEO) is a technique to bring the video in higher rankings on the first page. This research paper discusses about various factors which affects the SEO of YouTube in 2020.

**Keywords:** YouTube SEO, YouTube ranking factors, Search Engine Optimization for YouTube videos

## **1. Introduction:**

YouTube is the second most popular social media platform after Google. It has 2 Billion active users all over the world <sup>(1)</sup>. It is the top engaging & entertaining video sharing & video consumption platform available today. People from all age groups watch videos on YouTube.

As YouTube has a large number of users, number of marketers are attracted towards the platform. Marketers prefer to upload videos regarding the products and services, offers, discounts, features etc.

Till a few years back, there were few video creators on this platform. Any uploaded video used to get attention by the viewers. But today's scenario is altogether different. Large numbers of video creators are putting their work on YouTube and a large number of marketers are considering YouTube for promotion of their products & services. This has created a competition among the video creators to be in the top list of videos so that maximum viewers can watch their videos.

If you want that your video to be in top 3 or top 5 then focusing on SEO is very important. This research paper focuses on various SEO factors important to rank the video in 2020.

## 2. Literature Review

- Meng Cui, Songyun Hu (2011) studied search engine optimization concept and tools for promotion of websites. Search Engine Optimization (SEO) is a process developed and adopted by search engines which improves the search performance of users. Various tools such as Keyword tool, Link tool, Usability tool etc. are useful in SEO <sup>(2)</sup>.
- Krishna Choudhari, Vinod K Bhalla (2015) researched about the search engine optimization of videos with the help of keyword and feature analysis. For video SEO keyword research, video tags, title, description, video transcript, thumbnail, annotations are important. These all points should be considered before publishing or while publishing the video. Views, shares, comments, channel authority etc. points should be considered after publishing the video <sup>(3)</sup>.
- Y.K. Sharma, Atharva Ashthaputre, Vishal Jaiswal, Anvay Joshi, Shah Ali Raza Zaidi (2019) discussed the effect of sentiment analysis on SEO of YouTube. YouTube search mainly focuses on keywords. It also focuses on likes, dislikes, number of subscribers, view count, watch time etc. YouTube does not consider the sentiment of the comments provided by the viewers <sup>(4)</sup>.
- Gokhan Egri, Coskun Bayrak (2014) discussed the importance of search engine optimization from a website point of view. Search engines have considered it as an important source of information. Search engines provide the right information to the right user at the right time. As the competition is increased between creators, it is important to use search engine optimization for higher search engine rankings <sup>(5)</sup>.
- Nursel Yalcin, Utku Kose (2010) discussed the basic meaning of search engine optimization. The Internet has millions of users as well as millions of creators. When any user searches on any search engine for a query then there are thousands of search results appear on it. Users generally go through the search results on the first page of the search engine. Users generally go through only first five results <sup>(6)</sup>.

- Sergiu Chelaru, Claudia Orellana-Rodriguez, Ismail Sengor Altingovde (2013) discusses about the usefulness of social feedbacks for ranking video. Top rank videos for any search has high number of like and dislikes. Top rank videos have more views. That means videos in higher ranks have more viewer engagement. YouTube and Google have similar nature of search trend for any query <sup>(7)</sup>.
- Xu Cheng, Cameron Dhale, Jiangchuan Liu (2008) discussed that viewers can view the video on YouTube platform without logging in but for commenting and rating they have to login. So, comments show the more user engagement. Views are in large numbers but rating and comments are in comparatively less. This shows that viewers are more interested in watching the video than rating and commenting on it <sup>(8)</sup>.

### **3. Objectives:**

- 1) To learn about Search Engine Optimization
- 2) To explore & identify the factors affecting YouTube SEO

### **4. Research Methodology**

This is an exploratory research where researcher has explored various factors which affect YouTube SEO.

#### **Scope**

There are various video sharing platforms but this research paper focuses on YouTube only. Similarly, the SEO concept is applicable for websites as well as videos. This research focuses on SEO of YouTube videos only.

#### **Important Factors/Enablers Identification**

As an outcome of literature review, researcher has identified Ten important factors which make impact on YouTube SEO in 2020.

Sr. No	Factor	Source
E1	Keyword Research	Krishna Choudhari, Vinod K Bhalla (2015)
E2	Tags	Krishna Choudhari, Vinod K Bhalla (2015)
E3	Length of Video	Y.K. Sharma, Atharva Ashthaputre, Vishal Jaiswal, Anvay Joshi, Shah Ali Raza Zaidi (2019)
E4	Competition	Brian Dean (2020)
E5	Click Through Rate	Brian Dean (2020)
E6	Audience Retention	Y.K. Sharma, Atharva Ashthaputre, Vishal Jaiswal, Anvay Joshi, Shah Ali Raza Zaidi (2019)
E7	Like, Comment & Share	Y.K. Sharma, Atharva Ashthaputre, Vishal Jaiswal, Anvay Joshi, Shah Ali Raza Zaidi (2019)
E8	Video Description	Krishna Choudhari, Vinod K Bhalla (2015)
E9	Closed Caption	Krishna Choudhari, Vinod K Bhalla (2015)
E10	Keep Viewers on YouTube	Sam Oh (2020)

Enablers/Factors of YouTube SEO 2020

### Relationship Building Among Factors

Relationships among different factors which are considered for the study are mentioned in Table number 1. Researcher has considered opinion of various experts in this field regarding the factors.

VAXO Model is used for comparing factors pair wise. Relationship existence and relationship direction is produced by the discussion done with experts. Two factors are denoted by character 'i, j'. Following symbols are used to give the relationship

- 1) V - When i leads to j but j doesn't lead to i
- 2) A - When i doesn't lead to j but j leads to i
- 3) X - When both i & j are unrelated
- 4) O - When i & j lead to each other

Use of Structural Self Interaction Matrix is done from all factors considered for the study. Pair wise interaction is shown in the table-1:

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
E1	A	V	V	A	V	X	V	V	A	A
E2	V	X	V	O	V	V	V	X	V	V
E3	A	V	X	O	V	O	V	V	A	V
E4	V	V	V	X	X	V	V	V	X	X
E5	A	O	O	A	A	X	O	A	V	V
E6	A	V	V	A	V	A	A	V	V	O
E7	O	X	X	A	X	O	V	X	X	V
E8	O	O	A	O	O	A	V	A	A	V
E9	O	X	V	A	V	A	A	A	X	V
E10	O	A	A	V	A	O	O	X	V	A

E1- Keyword Research, E2 - Tags, E3 - Length of Video, E4 – Competition, E5 - Click Through Rate, E6 - Audience Retention, E7 - Like, Comment & Share, E8 - Video Description, E9 - Closed Caption, E10 - Keep Viewers on YouTube.

**Final Reachability Matrix: Table-2**

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	Driving Power
E1	0	1	1	0	1	1	1	1	0	0	6
E2	1	1	1	0	1	1	1	1	1	1	9
E3	0	1	1	0	1	0	1	1	0	1	6
E4	1	1	1	1	1	1	1	1	1	1	10
E5	0	0	0	0	0	1	0	0	1	1	3
E6	0	1	1	0	1	0	0	1	1	0	5
E7	0	1	1	0	1	0	1	1	1	1	7
E8	0	0	0	0	0	0	1	0	0	1	2
E9	0	1	1	0	1	0	0	0	1	1	5
E10	0	0	0	1	0	0	0	1	1	0	3
Dependence Power	2	7	7	2	7	4	6	7	7	7	<b>56</b>

**Level Matrix: Table-3**

<b>Enabler</b>	<b>Level</b>
E8	1
E5, E10	2
E6, E9	3
E1, E3	4
E7	5
E2	6
E4	7

As indicated in table -3, E8 is level one enabler whereas E4 is having level7.

## **SEO**

### **What is SEO?**

SEO is a short form of ‘Search Engine Optimization’. When we search any keyword on any search engine then that search engine ranks the results of that keyword.

Search Engine Optimization is Optimization of your website, video etc. so that it will come in the higher rank on search engines <sup>(9)</sup>.

‘SEO for YouTube’ in simple words is the marketing practices or tactics a creator follows so that the video appears in higher ranks of YouTube search.

### **Why is SEO important on YouTube?**

Three hundred hours of video content is uploaded on YouTube every hour <sup>(10)</sup>. This

means there is a huge competition between various video creators.

Thousands of video options are available for a single keyword. Whenever anyone searches for a particular keyword then thousands of videos appear on YouTube. Viewers generally click on top ranking videos.

So, it is important to rank the video in the top five. For ranking the video, SEO is very important. Marketer/ Video Creator can rank the video with the help of SEO.

### **Factors affecting the YouTube SEO**

Achieving the high ranking is not an easy task. Top video creators & marketers around the world try to achieve top position on YouTube.

Many factors are responsible for higher rankings/ SEO on YouTube. Following are some of the main factors affecting YouTube SEO in 2020.

### 1) **Keyword Research:**

Keyword research is the most important point in YouTube SEO. Marketers should identify various terms (which are considered as 'Keywords') which viewers search on YouTube. Videos should be created around Keywords. Keywords should be used in the video, video title, tags etc. Exact match as well as similar keywords should be used in a video.

While considering the keywords for video, keyword search volume should be considered. Keywords with few search volumes will give few views. So, keywords should be substantial search volume. Keyword search volume can be found with the help of various paid tools such as Ahrefs.com, Semrush.com. Keyword ideas can be freely identified with the help of YouTube suggested videos. Popular videos in the same niche can be viewed to find keywords for free <sup>(11)</sup>.

While creating any new video first important point should be taken care is the 'Keyword Research'. Keyword should be researched with keyword research tools and competition should be identified for the keyword. If competition is high for the keyword then it will be difficult to rank the video. So, an alternative keyword should be identified.

The video should be built around the keyword and it should genuinely contain information related to the keyword. Multiple keywords can be used in a single video but it is recommended to use only few keywords in a single video.

### 2) **Tags:**

Tags are the terms or words video creators/marketers use in the description of YouTube videos <sup>(12)</sup>. YouTube allows multiple tags for every video. Five to eight tags should be used for each video for optimization <sup>(13)</sup>. Tags should be related to video, so that YouTube can send a particular traffic searching for the video regarding the tags.

Tags can be copied from competitor videos with the help of some paid tools such as yutubetool.com, tubebuddy.com

After creating the video tags should be identified. Tags should be related to video which can give indication to YouTube about the topic of video. Tags should be related to the search queries which people usually search on the YouTube when they want to watch a particular video. Adding popular tags which are not related to the video must be avoided as it will give wrong indication to YouTube algorithm. Wrong tags will increase the bounce rate of the video.



### **3) Length of Video:**

YouTube is a video sharing platform which allows creators to upload videos of any length. Videos with short length are generally considered as less informative. Hence YouTube generally prefers and ranks videos with longer length <sup>(14)</sup>.

Creator should consider this point while creating the videos. The video should contain in depth information so that it will be of more length and more informative. Unnecessary increasing the length of video should be avoided because this will lose the interest of viewers and search rankings may go down.

Video creator should identify topics which can justify to a long video. Small length videos should be avoided as it is less preferred by the YouTube. Video should have in depth information and the viewer should get the satisfaction after watching the video. Unnecessarily increasing the length of video should be avoided as it will lower the audience retention.

### **4) Competition:**

Competition in the niche or competition for a keyword is very important in SEO. If the keyword has high competition then it is

difficult to rank the video, a huge amount of effort is required to rank the video. If the keyword has low competition then it is comparatively easy to rank the video.

So, creators should first analyze the competition in the niche and competition for the particular keyword. Keyword competition can be analyzed with the help of paid YouTube SEO tools such as Keywordtool.io, Kparser, and Keyword Keg <sup>(15)</sup>. It's always recommended to start with low competition keywords. After certain experience of video creation, the creator can go for high competition keywords.

Competition should be analyzed before making the video. It is easy to dominate in the less competition hence first preference should be given to less competitive niches. It is not impossible to rank high in more competitive keywords. High end video quality, good quality sound recording, low bounce rate, high Click Through Rate etc. can rank the video even if in high competition.

### **5) Click Through Rate (CTR):**

Click Through Rate is one of the most important SEO factors on YouTube. It is shown in percentage value. CTR is the percentage of viewers click on your video when it is shown to them as search results. If CTR is low then YouTube considers it as

a negative factor & lower the video rankings<sup>(16)</sup>.

So, it is important to have a good Click Through Rate for every video. That means your video should appear in the search results as well as it should be clicked by a maximum number of viewers.

To get maximum CTR, creators should focus on the thumbnail & title of video. The thumbnail is a picture or video icon which represents the video<sup>(17)</sup>. Thumbnails should be attractive, clear and customized. Viewers should be tempted to click on the thumbnail after seeing it. Title should be self-explanatory. Viewers should be able to guess about the video after reading the title. Main keyword should be mentioned in the title which gives a positive sign to YouTube.

To achieve high CTR the title & thumbnail should be attractive. No 'Click bait' should be used. The title and thumbnail should be related to the video and should not make any false claims.

## **6) Audience Retention:**

Audience retention is the percentage of video watched by the viewers. It is in the percentage value<sup>(18)</sup>. Viewers have a

tendency to leave the video in between and jump on any other video. This gives low retention. If viewers see the maximum length of video then that gives a high retention rate.

To get maximum retention it is important that the video should do the justice to the expectations of the viewers. If viewers find that the video is not providing the information as per expectations then viewers leave the video.

The creator should take care that video should be in line with the title and keywords. If the viewer finds that title is different from the video content then viewers will leave the video. Thumbnail should not be Click bait (false claims). It has been observed that click bait thumbnails give low audience retention.

To achieve high audience retention, the video should be made more engaging. Value should be provided to the viewer throughout the video. Viewer should not feel bored while watching the video. Some surprise elements can be added in between or at the end of the video. This will motivate the viewers to watch the video till end.

## **7) Like, Comment and Share:**

If viewers hit the like button after watching the video then it gives the indication to YouTube algorithm that

viewers are linking the video content & the video appears in more search results.

If viewers comment on the video or share the video that means viewers are engaging with the video. That means the video has engaging content. So, visibility of video will increase in more search results at higher rankings <sup>(19)</sup>.

It is observed that viewers don't like, comment and share the video themselves <sup>(20)</sup>. So, it is advised to ask the viewers to like, comment & share.

Viewers should be told by the creator to like, shares the video and to comments on the video. Innovative methods such as asking questions, experiences related to the video can increase the likes, comments and shares of the video.

### **8) Video Description:**

Video Description is the description provided by the creator about the video. It is in the written format. It will help the viewers to judge the video and they can make the decision whether to watch the video.

While writing the description it is useful to use keywords in it. Keywords can appear multiple times in the description. Video creators can set the mindset of viewers about the video with the description. The description should be natural and easy to understand for the viewers. The description

should not be written only considering the YouTube algorithm <sup>(21)</sup>.

Video description should give information about the video. Video description must have few keywords related to the video. Exact match keywords related to the video can rank the video fast. So, creators should avoid using broad keywords and should use exact match keywords.

### **9) Closed Captions**

YouTube algorithm cannot watch or listen to the video. It ranks the videos on the basis of the text associated with the video. Adding Closed Caption can be a good SEO strategy to make the video search worthy.

Closed Captions are useful in terms of mobile phone video viewers. Closed Captions can be more helpful in the case of audio disturbance for viewers <sup>(22)</sup>.

Creators should involve closed captions in all of their videos. Close caption will make an ease for YouTube algorithm to identify the topic and content of the video. It will give boost in ranking.

### **10) Keep Viewers on YouTube**

It is very logical that YouTube will prefer the videos which keep the viewers on the platform <sup>(23)</sup>. If any video motivates the viewers to go on another platform after watching the video then it can be a loss-making proposal for YouTube.

If viewers remain on YouTube then they will watch more videos, more ads shown to the viewers and more revenue will be generated by YouTube.

Creators should try to engage and keep the viewers on the YouTube platform. If videos motivate viewers to go to another platform after watching video then it will be a negative factor for YouTube. So, creator can refer the viewers to other videos made by him/her. This will keep the viewer on the platform and also improve viewership of YouTube channel.

## 5. Conclusion

YouTube is a very competitive but second biggest search engine hence marketers/content creators cannot avoid it. Merely recording and uploading video on YouTube will not guarantee the views. The video may be lost among millions of other competitive videos. Hence it is important to consider search engine optimization for the videos.

Keyword researching should be done properly. Keywords with high competition or keyword difficulty should be avoided initially. Competitors should be analyzed closely. If the competitors are of high authority then it should be avoided to compete directly with them on same keywords. Rather than that some similar

keywords should be considered for making Videos.

Tags should be used in limit. Tags should give proper indication to YouTube algorithm. Best way to use the tags is to analyze it from competitor's videos. Click Through rate should be maintained by the title, thumbnail in line with video content. Video description also need to give correct information regarding the video and should not mislead the viewers. All of this will ensure the audience retention. Audience retention will be considered as a positive sign by YouTube algorithm and the video will be recommended to more viewers.

With the help of 'Search Engine Optimization' Techniques in this research paper, high video rankings can be achieved on YouTube in 2020.

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# IoT devices: Use in Higher Education and Future

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## Abstract

### Background

Education has reached to newer heights with the inclusion of digital technologies. Despite the traditional classroom based education being profuse across the globe, several online tools have attributed significantly towards an efficient supportive medium in education. The concept of connected devices or things has given a new rise of the Internet. This has led to an efficient network system for information exchange. The information exchange through internet has led to develop a smart system so that students can survive in the competitive world. This whole concept is named as 'Internet of Things' IoTs.

### Objective

The aim of the research is to study the various IoT devices used in higher education and their applications in future.

### Research Methodology

Extensive literature review and secondary data research has been conducted to explore the various IOT devices and their applications in future in several higher education institutes. The study has been conducted to explore the future of Internet of Things in higher education.

### Findings

The study has come out with the scope and application of several IoT devices used in higher education institutes. The role of IoT in building up the future of the students in higher education has been discussed in the study.

## Managerial Implications

The study is beneficial for sustaining a better future for the upcoming generation to compete for their career.

### Originality

The study can bring up a wide change in shaping the students with critical thinking and innovative skills.

Keywords: Internet of Things(IoT), connected devices, smart system

## 1. Introduction

Technology is covering education just as a part of its inevitable influence in every sector. The optimal combination of several new technologies in teaching has given good learning outcomes (Abedodun et al., 2014). The information communication and technology have a broad impact in the present education system. Education sector has created enough stir to make the business community rethink its prospects in global scenario. To shape education in a smarter way the aspiring education institutes are striving hard to make the best out of the technologies. Recent technology has put more emphasis on active learning by more engaging and direct procedures, which is also endorsed beneficial by several research initiatives. Education merged with technology has engaged students in learning and broadening their skills. This has overall prepared the students to meet the challenges and create a place for themselves in the competitive world (Abedodun et al., 2014).

The boom in social networking has also contributed to this active as well as collaborated learning, promoting a newer approach towards education. Web learning

paradigms getting more profuse also confirms the fact that the modern learning community has been relying upon Internet and connected technologies a lot. The interaction with learning materials has also seen its newer approach from technology where classrooms are getting open and education is reaching beyond barriers. However adopting newer technologies though opened up the global space of learning has still several bars towards its full spread. Despite the increasing connectivity, newer leap of innovation, it is inevitable to make the most out of the connection and collaborations. To survive in the edge of competition, the IoT is essential. The main objective of this paper is to study different IoT devices and their applications which can be used to impart quality knowledge in higher education institutes. The paper discussed the scope of Internet of Things in education.

## **2. Literature Review**

Education has reached its new height with the inclusion of digital technologies in it. Despite the traditional classroom-based education being profuse across the globe, several online tools have attributed a lot towards acting as efficient supportive medium in education. The concept of connected devices or things has given a new rise of the Internet. This has led to an efficient network system for information exchange. The information exchange through internet has led to develop a smart system so that students can survive in the competitive world. This whole concept is named as 'Internet of Things' IoTs.

IoT devices have been currently used in higher education to increase the engagement of the students in the classroom. The IoT devices in education system includes Attendance tracking systems, Temperature sensors, Advanced Security Measures, Wireless door locks, eBooks providing a better way to Learn, Mobile Devices and Tablets, IoT enabled board, Wearable Tech, Video Recorders for Lecture Capture, Sensors in Parking

lot, Sensors track buses, Laser Trimmers, Mobile-based learning, Video-based learning, SMART, Idea- paint, GPS-enabled bus system, IPEVO and several others. IoT devices used in higher education encourage students to learn with technology. Learning algorithms, programming skills, teaching through online courses have their own challenges but they make students smart. It has been found in reports that more than 80 percent of students using IoT are adult learners. This leads to several challenges as the students using the IoT devices rarely are slow in their work. Thus, it is required to make the students aware about the IoT devices in higher education institutes. China has focus on the application of IoT on agriculture, logistics, transport, electricity, health and others ([http://news.xinhuanet.com/english/china/2012P02/14/c\\_131410233.htm](http://news.xinhuanet.com/english/china/2012P02/14/c_131410233.htm)).

Technology adoption in agriculture has led to sustain the system (Kumari, 2017).

## **3. Research Methodology**

Literature review and secondary data research was conducted to explore the various IoT devices and their applications in future in several higher education institutes. The study has been conducted to explore the future of Internet of Things in higher education institutes. Around fifty research articles have been reviewed from quality journals and Secondary data has been collected from the database of several higher education institutes. The several IoT devices and their applications have been reported in the paper.

## **4. Results and Discussion**

Internet of Things is the technology to connect things to build up an interaction between people and things. In a learning society it is essential to increase student's knowledge and increase their skills. Students should absorb the contents by utilizing the online resources and e-books. Latest educational trends include Flipped Classroom and Massive Open online

courses. Kamar et al., 2016 has explored various IoT platforms in their research. Microsoft Azure Iot enables the use of advanced data analytic to transform business.

Radio Frequency Identification and Wireless sensor networks technologies are the innovative features used in education system. Machine to machine, machine to object and object to object interactive implies a complex typology between devices. The RFID readers delict the sensory data and sends information to a private cloud system for decision making. Wireless Sensor Network constitutes of a group of tiny sensors. There are few components in education which can be managed. Home smart backpack, classroom check in, smart desk and whiteboard. The home smart backpack is designed to track the backpack through fingerprint. Classroom check in services helps to provide the email service for the students and teachers. Smart desk is used to receive instructor's writing on the white board. They can easily see it on their laptop. Smart whiteboard is another component where the students receive and sends messages, questions, images, text and lectures. IoT includes objects, smart devices, sensors etc. to create value added applications. GPS and wireless network make the vehicle and transportation system smart. Traffic and video sensors can be detected through GPS. This leads to better transportation in higher education. IoT can be used to access medical history, electronic patient records and e-health (Mahalle and Railker, 2015). The application of IoT and their impact in health in industries has also been discussed by Kumari et al., 2017.

IoT constitutes of IoT enabling technology, marketplace and application desirable to users (Friess, 2013). IoT is not a single technique but it is a concept to connect things (Vermesan et al., 2013).

**Table 1: List of IoT devices, it's features and role in higher education**

S.No.	IoT devices	Features and Role in Higher Education
1	Amazon AWS IoT	<p>Manages cloud platform supporting several messages</p> <p>Connects the application and devices, collects IoT data and manages services. Such devices</p> <p>provide open source to create and receive data. It</p> <p>Focuses on data management. Few IoT devices are an open source to store and retrieve data over the internet. It allows to connect device for sharing information</p> <p>Allows retrieving data from different sources. IoT devices</p> <p>Offers search tools for public sensors. It allows for easy sharing of data.</p> <p>Monitors and control devices.</p> <p>Is a cloud service which interacts with devices and sensors</p> <p>Retrieves large amount of data from devices</p> <p>Provides infrastructure for connecting things</p>
2	IBM IoT	
3	Xively	
4	Thingworx	
5	Thingspeak	
6	Pariampu	
7	Open Source	
8	WoT kit	
9	Every Thing	
10	Smart Things	
11	Isobridge	
12	Nimbeta	
13	Thingier	
14	Sensor Networks	
15	M2M	
16	Mobile Internet	
17	Semantic data Integration	
18	IPv6	
19	3G	
20	LTE release 8	
21	LTE release 10	
22	Cloud Computing	
23	Overlay network	
24	Green Networking Technology	
25	Virtual Sensors	
26	Bluetooth low Energy	
27	Ultra-Width Bandwidth Technology	
28	NFC	
29	Smart metre	
30	Biometric Strap	
31	Wireless Sensor Network	
32	Bluetooth Interface	
33	CASAGRAS2	
34	Ebbits	
35	Elliot	

#### **RFID** (Radio Frequency Identification)

It is a wireless identification technology that uses tags carrying electronically stored information, which is detected by the nearest RFID Reader. These readers work



on radio frequency also called as radio transmitter-receivers or interrogators send out a signal to the tag and read its response. The receiver reads the response in electronically stored information inside the tag. The tags are attached to clothing, automobiles, pets, and pharmaceuticals, for tracking the progress through the assembly line in car manufacturing. The reader and the attached tag need not to be in line of sight like the Barcode system. Unlike barcode, this identification system has a far range of identification from 100 meters away. The concept being simple, this is detection of the tags by sending out far strong signals in all directions (Figure 1).



**Figure 1: Application of RFID in School Attendance Management**

**Wireless Sensor Network**

The wireless network consists of small sensors distributed over a field building a network of multiple sensors. They're called sensors as they sense and detect events and send the absorbed data to a sink point. This sink point is a gateway having a specific sensor node called mote, which can perform some processing and carries sensory information and communicates with other nodes in the network. This node gathers information from all other sensor in the network and sends it through the

gateway for further analysis related to the events captured. Sensor node is a sensor in a sensor network (Figure 2).



**Figure 2: Wireless Sensor Network Smart Desk**

This desk is equipped with IoT sensor detection; it uses RFID system for authentication of its user. Each Student has a preconfigured smart desk. The users are authenticated as this desk checks fingerprint, RFID Card or a cell-phone interaction, and once everything is verified user can use the facilities of smart desks. This desk can connect via wired or wireless connection, once the user gets the required authority, SMART desks services and facilities like Smart Whiteboard can be used. Users can assess the main system to pull every service offered. Since this desk is connected with other desks as well, a student can receive what is written on the whiteboard and see it on its laptop, a part of the desk. With authorization permissions the users can interrupt and teaching by asking questions via the laptop screens or the whiteboard. As this desk technology has a mini cloud system, every information received or sent are recorded on the cloud. The list of IOT desks also recorded is in the cloud, which can be used for attendance.

### Biometric Strap

The present application relates to a portable biometric monitor strap and to a portable biometric monitor comprising said strap. More particularly the present

application relates to a wearable biometric monitor, such as a heart rate monitor for attaching to a wrist of a user. Physiological data can be measured from a user by using portable biometric monitors, which may be attached to the user, for example to the wrist, forearm, or arm of the user. The physiological data may include for example heart rate. Traditional monitors usually contain a separate sensor, which is attached for example to the user's chest with a strap, and which communicates wirelessly with the wrist device. The use of separate sensors complicates the use of a portable biometric monitor, and therefore there is a need to develop solutions embedded to the wrist-attached or other extremity attached device.

#### **Smart Meters**

These are next generation meters for gas and electricity, replacing today's standard meters that use technology created years ago. This network automatically sends the actual electricity usage to the supplier, so the need of tracking household bills and following up to places for bill payment is totally erased. It helps in more accurate bills: There is no need of estimation. No more strange people coming at your house to take a reading from your readings.

#### **Parking Sensors**

It becomes difficult to find a parking space the city center, but can also waste time, cost money and result in needless pollution. Bosch came up with a system where the parking spaces used are to inform drivers where they can park. It is a reverse method of using free space, since instead of the user searching for parking space, the parking space itself is notifying the coming vehicle of its availability. It can be used for daily management and long-term planning.

#### **Network Application Analytics**

##### **Learning Management System: LMS**

In this technological era training needs to be simple and accessible. LMS allows creating, distributing and tracking training anywhere, on any device. With LMS its

possible for anyone to create, track, manage and distribute learning materials of any kind. Nearly a ten billion-dollar industry, this system allows any organization to develop electronic courses to work on, deliver it with flexibility. Some common components or features that can be found in many eLearning platforms include rosters, registration control, document Management, Multiple device access, Distributed instructor and student base, Course calendars, Student Engagement, Assessment and testing: Creation of knowledge retention exercises such as quizzes and comprehensive examinations, Grading and Scoring.

##### **Content Management System**

It provides competences for several users manage content, data or information of a website project, or internet/intranet application.

##### **Sensors on Trash Receptacles**

The automatic Motion-Sensing Touchless Infrared Trashcan eliminates spreading of infectious diseases and food impurities. Germs such as E. coli, staph and salmonella can survive on the surface of a trashcan for several weeks. This trashcan looks like a sleek, that has stainless steel as exterior complementing the decor style, the motion-sensing technology is a hands-free design allowing the lid to open when any object approaches the sensor range. As object is moved away, it closes automatically to avoid the smell from escaping, and since there is no direct contact with the can or lid, ones' hands are germ free and eliminates the spread of germs.

##### **Wearable for Health Fitness**

IoT-enabled wearable healthcare devices provide individuals with the information they need to gain better control over their health outcomes. There is high demand of Wearable devices are since they offer individuals greater visibility and analysis into their health position, letting them to make more informed choices about their health and well prepared for the outcomes

with neither less expectation or high expectations.

- Individuals can observe various fitness, health, and wellness factors to track progress toward health objectives.
- People having health concerns which requires close monitoring can use a wearable device to track day-to-day basis the important health parameters.
- Patients can share data from their wearable devices with their healthcare monitors to provide physicians and other medical staff. Using precise health measuring devices like such helps detecting even minor health issues that may not come in notice if not equipped with such technologies.
- User can also connect their devices to other social networks.

## **5. Conclusion and Future Directions of Research**

There are various ways by which internet can become a boon for young generation. Internet of Things helps in transforming students to meet the critical challenges of the society (Kortuem et al., 2013). Internet of Things helps students to see the emerging new jobs. They can match their skills with the job and meet the self as well as industrial needs (Rifkin, 2011). There have been increases in the number of people who are demanding IoT in their education. The reason being today the consumers want to be the producers so that they can meet their needs through technology (Mille, 2011; Topscott and Williams, 2008). This has led to the requirement of IoT education right from the schools.

The study is limited to several IoT devices used to build up higher education in institutes. The research is a desk-based research discussing only about the IoT devices and their applications. However, the researchers feel that the research can be extended by surveying Indian higher

education institutes and the enablers as well as barriers in application of IoT devices. The students can also be surveyed to find out the IoT application in their education.

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# **GREEN MARKETING IN INDIAN CONTEXT**

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## **ABSTRACT:**

Continuous rise in the education and increase in social and environmental awareness in the country has given importance to many good concepts like green marketing, environment friendly product, reusable packaging. Producers are continuously updating the packaging and product designs and processes to get customers' acceptance in the market. Green marketing takes a novel impression in the market and for those who desire to plan their products as an ecofriendly and attract the large market segment of environment caring customers. Green marketing focuses on the process of making products and services which are constructive for the environment and contribute towards sustainable development. Green marketing covers the widespread scope which includes modifications in manufacturing process to the marketing strategy of a business. New generation customers are educated and aware of what is going around the world,

they are keener to keep the family lifestyle as well as surroundings healthy, it is the major reason customers are favoring products or services which are less harmful to the nature. This paper explains pros and cons of green marketing in details as well as the Indian context of green marketing along with how customer has been accepting it.

**Keywords:** Green Marketing, Indian Context, Green Marketing strategy, Green marketing in India

## **1. INTRODUCTION:**

Technological advancements and globalization has increased manufacturing, industrialization and market demands for products and services. Due to rise in the global population the consumption rate and demand is going high. The rise in the manufacturing has brought so many problems like global warming, pollution, scarcity of natural resources. Due to increased pollution many health and environment problems have raised. Lot of organizations and NGOs are taking

initiatives to spread the awareness of the same issues and create sensitivity amongst people. Accepting the fact that humans are nothing without a healthy planet, now customers has started to give preference for environment friendly products and service. Customers are continuously shifting their lifestyles to contribute in well-being of ecosystem. This is the reason terms like green marketing, eco-friendly products, recycled packaging, eco-labeling are considerably popular in the market.

Jacquelyn Ottman the author of a popular book "The New Rules of Green Marketing: Strategies, Tools, and Inspiration for Sustainable Branding" has wrote in his book that businesses should consider environment benefit in all the processes they do from manufacturing to marketing and communication. Marketing must contribute in solving environmental problems and help firms establish sustainable development (Polonsky et al, 1997).Mr. J. Polonsky well-defined green marketing as, "all activities designed to facilitate any transaction for the purpose of meeting human needs and deserve the least harm to atmosphere."

Because natural sources are restricted in addition human needs are limitless, it is essential that marketing personnel use

resources proficiently and achieve the company's mission. Environment being the most important factor in everybody's lives people from all over the world are taking interest in saving it or even if they can contribute a little to save the atmosphere they are willing to do it. Studies shows that new consumer is more caring for environmental safety and he is trying to shift himself to green goods and services to maintain the sustainable development. Marketers and manufacturers knowing the same fact are trying to shift to the Green businesses from processes to the end product and services. Analyzing this scenario, green marketing has grown faster focusing a lot on ecological and socially responsible products and services. The World Commission for the Environment and Development describes ecological progress as "meeting the needs of the future without compromising on the needs of the future generation" (Front land Report, 1987).

## **2. STRUCTURE OF PAPER**

This research paper is grounded on secondary data which is collected as of scholarly research paper and websites. First section of the paper discusses the green marketing scenario in India. In Second Section review of literature analyses the

green marketing concept elaborated by different scholars. In third section illustrates the green marketing strategies then the limitations and advantageous of green marketing and customer acceptance in India so far.

### **3. SCOPE OF THE STUDY**

The paper is restricted to marketing discipline and covers the relevance of green marketing concept in Indian market context only. The similar research can be conducted for outside India region or for global context.

### **4. OBJECTIVES OF THE STUDY:**

1. To outline green marketing term in detail
2. To recognize green marketing future opportunities
3. To understand green marketing pros and cons
4. To know costumer perception about green marketing

### **4. LITERATURE REVIEW:**

In developed nations the rules and regulations related to environment protection are becoming more and sterner due to the environment issues world is facing recently. Modern consumer is more

aware about environment so businesses are moving towards green practices (Polanski et al., 1998; Protiero, 1996). Many nations from Europe has got their attention on green movements. (European Green, 2004). Media and environmental organizations who works to protect green are taking lot of efforts to sensitize the people for environment safety from policy making to monitor the actual progress. (Medleson and Polanski, 1995)

Environmental marketing or sustainable marketing is composed of all the efforts that an organization takes while designing, manufacturing, selling and promoting in eco-friendly way. (Bright and Ferrell 1993) Many other authors like While Pride and Ferrell, Polanski and Elkington has mentioned in their studies that eco-friendly products and services are necessary to keep the environment safe and balanced.

The bad impact of global warming and other man made pollution is getting lot of attention these days. Manufacturers as well as consumers are becoming more and more sensitive toward green marketing practices. Beatty (2001) mentioned in his studies that the term green marketing has three phases first is environmental issues and solutions for those, second is the concern towards

eliminating pollution that causes lot of environmental harm, pollution can be reduced by designing the clean manufacturing processes and recycled packaging's even technology can contribute in this process, the third concern is sustainable development which will help to follow green practices for long period. Many organizations are paying a close attentions on green marketing as it contributes a lot in sustainable developments. (Polanski et al., 1998; Protiero, 1996).

### **Benefits of Green Marketing**

Green marketing has many parameters to taken care of like Energy efficiency, clean / renewable energy use, water conservation, recycling and waste management, environmentally friendly clothing, organic produce, sustainable agriculture and more. The key to a successful green marketing strategy is to communicate real and tangible facts about a company's involvement in social and environmental causes.

### **New Market Opportunities**

Businesses can create many opportunities in green marketing field because if the right products and services with the fulfilling need of costumers are available in the

market off course these will get much popular and in demand for long time. If businesses create awareness for green products and services customers will choose these products again and again. Products with recycled packaging are already getting more popular in the market is the best proof for this. Benefits of Green Marketing includes highlighting sustainable manufacturing practices, the use of environmentally friendly and organic materials within the workplace, composting and recycling at work, and carpooling to work. Enhanced packing, paperless policies, recycling ink cartridges, planting trees, reducing your carbon footprint.

### **Added Profit**

Products and services having green or sustainable content are popular among customers. Customers willingly pays more for organic and chemical less products due to its health and environment benefits. Companies have opportunities to market their products and services as eco-friendly and increase demand for them.

## **To win the competitive advantage**

Company who stands for social and environmental issues and takes efforts to improve any of it has a special place in customer's heart, these businesses easily stand taller among the other competitors. Rather than producing hazardous chemical products which has some hidden harm to human health and environment one can choose simple products which fulfills the true needs of customers with right marketing campaign promoting green and sustainable products.

## **Corporate Social Responsibility**

Organizations that contribute for the wellbeing of society and environment has a great impact in market. Building a strong green marketing strategy can help company a lot in building a good brand image. Customers give preference to such companies who are sensitive towards environment and social charity. Entire Foodstuffs supports sustainable agriculture with its suppliers and created its own environmental scale for cleaning products that are sold. These may be large-scale companies, but when it comes to green marketing benefits, the same possibilities apply to smaller companies as well.

## **Green marketing Limitations**

### **Increased budget**

Green practices often is not that easy to implement due to many standards and procedure involved. When organizations are making new strategy according to it they need to change product designs to manufacturing processes even that includes packaging and labelling of products, doing all this takes lot of expenses.

### **Certificate fees**

To promote green legally companies need authentic certifications issues by government departments or consumer right organizations. These certificate agencies required lot of standards and procedure to follow meticulously. Lot of organization has seen these difficulties from energy consumptions and recycling sector. These certification processes cost lot of fees and without authentic certificate customer may not believe in green claims.

### **Green washing**

Due to the increased demand of green products and services many companies are trying hard to present themselves as green but in reality they are just fooling customers



by green washing. Having only green certificates or too much focus on a very little detail is often done by companies.

### **Green Marketing strategies**

Organization who are contributing towards green marketing and has actually practicing green and eco-friendly sustainable approach are customers favorite. Any organization small or big can shift themselves as a green marketer below are some strategies they can opt:

1. Designing the green products and services can be a good strategy. Products like solar water heater can save lot of energy consumption.
2. Positioning a brand as green can help company a lot in terms of popularity in the market and creating brand loyalty. This strategy may need green certifications and association with other green organizations to be successful.
3. Promoting green products and services as price saving or economically benefited is one more strategy organizations can follow. CNG cars have used the same green pricing strategy, they always promote how economically

affordable CNG is and also the environment benefits associated with it.

4. Green distribution and logistics by designing all the activities in such a way that it will not harm the environment is one more good green strategy that any company can follow.
5. Many manufacturing organizations produce hazardous waste that can harm human health as well as lot of pollution to environment. Green disposal can be used to reduce such harmful waste and contribute towards ecological wellbeing.

### **Green Marketing in India:**

#### **HCL Technologies**

Ego to identify is the initiative taken by HCL to promote and practice environment friendly corporate campus. The main objective of this project is to integrate knowledge and spread awareness regarding environmental problems without compromising on the quality of products and services. HCL follows environment protection and includes ecofriendly practices in organization. HCL manufactures products that are not harmful to environment, they

believe in product life cycle so make reusable packaging for most of the products.

### **Kansai Nerolac: Lead less paints**

Kansai Nerolac took initiative and eliminated hazardous and dangerous heavy metals from its paint. The dangerous heavy metals was not good for human health. Types of heavy metals are lead, mercury, chromium, arsenic and antimony. Paint containing these materials are harmful to humans it can damage the central nervous system, kidneys, and reproductive system. Kids are at more risk from lead paints as it can cause memory loss or other problems like decreasing their intellectual power. Kansai Nerolac has introduced the environmental cleanliness of Nerolac logs. It is an eco-friendly paint with low volatile organic compounds (VOC).

### **Oil, Natural Gas Corporation (ONGC)**

Oil & Natural Gas Company is one of the India's largest oil supplier, is heading a rundown of the top 10 Indian systems for green marketing with energetic, green cremations, a nation that quickly replaces conventional wood fires. ONGC saves around 75% of the timber and one-fourth of

the time to burn by following the crematorium.

### **ITC**

ITC being a big player becomes first company who has introduced ozone-treated elemental chlorine-free bleaching technologies in country. ITC known for its active initiatives and participation in protective green. It recycles almost all of its produced solid wastes and has active rainwater harvesting which generated more water than they use. By following all the environmental rules and standards ITC has developed initiative which saves nearly 35 thousand hectares of dry land.

### **Suzlon Energy**

Being 4<sup>th</sup> largest wind-turbine manufacturer in the globe and India's top 10 company has established Tulsi Telegraph in Punducherry. They produce 30% of renewable energy in our country and they are one of the largest group in the glob to reduce their carbon footprint. The Suzlon Corporate Building is the most energy efficient building ever built in our country.

### **Wipro**

Wipro is Indian IT giant who does many businesses as individual companies. Wipro introduced environment friendly devices in India for the first time. Wipro brought new range of laptops and desktops entitled Wipro Green Wear, which are ROHS [Control of Hazardous Materials] and thus reduce electrical waste in the environment. Wipro introduced sustainable development in terms of energy, water and waste recycling. It is desperately trying to be a green company. Its core efforts to be a green company are achieved by achieving its objectives of being carbon neutral, water positive and energy saving in the business enterprise. It designs products to reduce hazardous waste. Wipro has reduced its personal electricity consumption and purchased renewable energy. Wipro buildings conform to various international green standards.

### **Godrej**

The Godrej Green center has adopted green practices in their day to day working. Godrej has been taking good initiatives to nurture the environment by ecofriendly designs, construction, operations, maintenance and waste recycling. Godrej Green Buildings has set the pace for change in the Indian construction industry

## **6. CONCLUSION**

Green Marketing is the need of today's global market. Green products and practices will help us to save our environment and it will establish sustainable development. Companies should start following green marketing in their day to day production. Customers should demand more green products as this is the only way to motivate industry to adopt more green marketing strategies. A small steps towards saving environment can solve many problems and in the long term we may be able to save our environment. Green marketing is getting more and more popular in Indian market but it needs greater push from the government side also.

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# **The New Era of Digital Transformation in Healthcare: “Emerging Technologies for Value-Centered Marketing in Healthcare Ecosystem”**

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## **Abstract:**

In an increasingly digital competitive environment, especially in the healthcare ecosystem, digital transformation leaders have an important role, with only a handful of companies evolving into more upgraded digitalisation systems. To renovate experiences of customer, companies required to adapt digital marketing achievement in the drastically modified digital era, reinventing marketing with this kind of travel in the healthcare industry. Also, it is very important to evaluate the impact of digital transformation over the professional competencies and the cutting edge of digital marketing in healthcare industries, which are an integral part of some organization, is to improve digital marketing capabilities as well as invest in current skills training. One way to think strategically is to attract and give alternative services health quality that guarantee their likelihood and satisfaction of recommending additional health care. This research demonstrates that social media sites play a significant part in promoting social networking. The results of this research showed that digital

approaches are necessary to improve medical services to expand an enterprise.

Although healthcare IT (HIT) has effective and efficient potential for increasing quality as well as decrease costs in healthcare ecosystem, major challenges have to be addressed, especially in the healthcare sector. This potential has to be fully realized. Research provides true lessons and evaluate the outcomes in learning importance of digital transformation to improve healthcare ecosystems knowing the importance of technology innovation to enhance environments.

**Key words:** Electronic health records, Healthcare transformation system, Health information technology, Value-Centered marketing, digital marketing, promoting social media, Digital transformation, Digital era, Digital marketing success, Digital marketing skills.

## 1. INTRODUCTION

The role of marketing with digital transformation in improving healthcare industry:

In this digital era of healthcare the broad perspective of relationship is becoming increasingly important, healthcare advertisers are being persuaded that the patients become more interested to access information that enable them to empower them with new technical innovations, digital health techniques which are boosting patients' awareness, safety measures in proper controlled manner. (Purcarea, 2016).

It can be little more than a declaration to determine the vital significance and absorb most important national dramatic challenges confronting our nations today climate and employment change, health safety and status, poverty as well as well-being of people plays a crucial importance and consumes most of the significant national resources. (Institute of Medicine 2000).

The reality that the American health insurance process is also unreliable and provides fewer effective digitisation facilities in the health-care sector allows paper-based patient reports part of the explanation. Such reporting systems do not enable policy makers in the markets to regularly access crucial pieces of clinical information when making their clinical decisions which result in the disclosure of resources or medical errors. The large and profound usage of HIT "Health Information Technology" in the health-care sector will minimize and boost costs by digital transformation in the environment, along with other

complementary modifications (Instituto de Medicina 2001), although the benefits and potential unintentional effects remain challenging to understand. (Institute of Medicine 2000).

Digital transition in healthcare provides us with a forum that absorbs our mutual experience and bursaries with sufficient tools for conducting research work which can educate public deliberations, digital system and competitive marketers to engage effectively in national healthcare change discussions. This statement offers an description of the present situation for providing the analysis of the present HIT studies status. In order to resolve the digitalization, we then recognize critical study problems that are unattended, as well as suggest appropriate approaches.

***"Today healthcare system is undergoing a major transformation fueled by regulatory shifts and technological advances (Porter and Rivkin 2000). New policies are pushing healthcare organizations to contend with a paradigm change where value is rewarded over volume, and where the nature of competition is being radically altered (McClellan and Leavitt 2016)"***

Technology advancements have increased clinical analytics' popularity as a method for assessing and generating interest in hospital marketing (Agarwal et al. 2010; Bates et al. 2014). A broad range of technology has enabled market penetration in a number of structured as well as unstructured forms to collect vast quantity of granular data related to health. Such advances allow it possible to shift to value-based care that allows outcomes to be

assessed and quantified (World Economic Forum 2017).

The shift to value oriented offerings and accelerated technical and empirical advances pose new problems and opportunities that are ideally tailored to the marketing emphasis on the growth of consumer satisfaction. While it is not historically a central area for digitalisation, such incentives are now recognised by marketing experts (Nakata et al . 2019; Spanjol et al . 2015).

***VCM “Value-centered marketing” in healthcare is characterized as the methods used to identify, delivering and quantify value for health promotion and disease treatment.***

***The main objectives of this research are:***

1. In order to present value-centered marketing structure.
2. In order to define the supporting role for value-centered marketing in analytics as well as health technology.
3. In order to identify significant value-centered marketing research gaps associated with process, precision, and preferences.
4. Focus on unintentional effects and the concept of justice in technical and theoretical healthcare delivery.

## **2. Overview of Existing Research**

A huge literature review is present on Hospital Information Technology with respect to digital transformation of marketing, and this statement is within the reach of a comprehensive overview and

analysis of every published research. Our analysis shows that Value-Centered Marketing study is based mainly on two subjects: the effect of Digital Transformation on health results as well as problems of HIT acceptance. We propose specific concepts to structure this literature: synthesize the results of previous studies.

While a increasing number of studies are reported in clinical journals, Medical Technological Journal, though limited paper are published, National & International journals. We summarize many representative clinical trials, on New Era of Digital Transformation of Marketing services especially in Healthcare Industry, published in recent years on the modern age of the digital transformation of marketing services, and referred publications to the literature reviews as needed.

## **3. Value-Centered marketing:**

### **Healthcare Industry Ecosystem**

We start by offering a brief description of the dynamic relationships among different players in the ecosystem- policymakers/ regulators, suppliers, payers (governments and insurance networks), providers, along with consumer. The major requirement of consumer is illness treatment along with wellness promotion. In view of the costs of treating severe diseases as well as even drugs, the industry has gradually evolved into one covered by insurers, which covers hospitals and service providers in large insurance networks. (The Greenberg and De Lew 1992)

Suppliers to provide a customer (patient) with drugs as well as another items are usually supplied by the suppliers, but paid by the contributors. The government tried to control suppliers, providers, and payers. (De Lew and Greenberg 1992)

Although customers and end users of healthcare services and products are the primary generators of demand, interestingly, they are seldom at the center of the health environment. Typically, health care delivery interactions have affected occupiers, suppliers, and providers. This often does not assign importance to positive health conditions or take consumer choice into account which may contribute to the unnecessary over-supply of resources (Porter which Kaplan 2016).

To order to resolve such issues, a modern method for the introduction of the volume-based framework such as digital payment is actively introduced (Burwell 2015). Value-based schemes are built to improve effective coverage for healthcare sector consumers, thus growing costly and needless obstacles in the delivery of services. (Medicare and Medicaid Services 2017a)

#### **4. Need for Value-Centered Marketing**

Marketing efforts depend on, revenue in the conventional volume-based framework which are geared to health providers and not to customers (Schwartz and Woloshin 2019). Additionally, commercial insurance services recently introduced regular outreach campaigns that have historically concentrated on business and not consumer clients. (Hadland et al. 2018;

Hadland et al . 2019); and The goal is to encourage particular patients to select the strategies and physicians that match their desires and priorities and eventually contribute to better results for patients (Rice 2013).

Opposing the edge of healthcare advertisement, current demand dependent paradigms have clearly lost customer appeal. It has contributed to an immediate need for the health marketing ecosystem to be reconceptualized and eventually to offer customer interest a central position (Lynn et al . 2015). Along with the acceptance of the new marketing strategies in the industry, to grow further development of value centered marketing era with digital transformation, leading to more technological advancement ahead in the healthcare based systems.

Therefore, this analysis focuses specially on developing health technologies as well as analytics are significant in order to improve service for customers, specifically for patients who required clinical care, however this research also emphasis on the role of different stakeholders in the system (Lynn et al. 2015).

#### **“With Emerging Technologies and health analytics, offering a marketers a robust set of opportunities”**

The aim of VCM for quantifiable value development across the key dimensions of process, precision, and preference. VCM has to be based on data as well as automation in order to accomplish this purpose. Fortunately, development in health analytics in past years has rendered it possible for the VCM to give advertisers



a broad variety of incentives, both in terms of knowledge access and research methods. Choi et al . 2016 (Switzerland).

In terms of analysis, processing, and analytics substantial improvement was made in the area of methodologies in the health study system.

Health analytics have become a huge help for Value-Centered marketing, due to the use of massive data in healthcare and developments in methodology.

## **5. Electronic Health Records**

EHRs was developed to monitor a broad variety of patient details and enhance coordination among various providers including primary care laboratory along with physicians technicians, specialists and patients. Accordingly, data may only contain standardized details such as diagnoses, medication prescriptions, and demographic information, but also unstructured data including free-text clinical reports, which can provide further insights into patient's social environment, behaviour, and attitudes (HealthIT.gov 2018).

Health research models utilizing EHR data usually allow clinical experience for input parameters to be chosen, and non-numerical data to be manually coded, which is labor intensive. Non-numeric info, including diagnostic codes, can then be translated easily into machine vectors (Wang et al, 2018). With this new path to digital age transition adoption, a new route has helped the big data on EHR systems to be properly leveraged.

## **6. Mobile Devices and Wearable's**

Social networking, mobile devices, and wearables offer a vast variety of possibilities for the processing of large-scale data (Oldenburg et al . 2015). Throughout addition to sensor data related to the wellness and health sectors, it provides mobile data utilized in many marketing fields, like fine grain tracking data. Throughout fact, health devices and trackers gather vast quantities of user data, such as activity levels, diet, and physiological measures such as weight and heart rate. There have also been a increase in mobile apps collecting healthcare details related to many health conditions. For starters, through the help of coordinated sensors, diabetes patients may accurately control their sugar level. From smartphone phones, walked steps, respiratory rate, and pulse rate, etc. are evaluated (Donevant et al. 2018).

The interest of consumer in digital health continues to develop, wellness health and apps crossed 3.35 billion worldwide (IQVIA 2017) users.

*Through continued growth in collaboration of health care practices, a lot of marketing research will be necessary.*

## **7. Social Media and Online Channels:**

There have also been several impacts for consumer analysis and interest co-creation in marketing analytics field through the social network and onlines. Such results are also valuable in the area of health research. As ordinary people are likely to be among the new wave of patients, the

electronic platforms become much more critical to recognize and accomplish them.

Online forums are another useful source of health care results, as a great number of individuals switch to interactive support networks to help their wellness goals such as weight reduction and to consider more the possible advantages and costs of different clinical treatment programs (Goh et al . 2016). A recent movement to include consumer needs in decision taking is evolving in acknowledgment of the value of what patients want. The user is regarded an involved participant in shared decision-making, whose interests are crucial in decisions on treatment and health strategies (Légaré and Wittman 2013).

## **8. Targeting the right consumers for treatment and preventive care**

Payors are urging clinicians to create services to help individuals build and sustain healthier behaviors to meet their public health targets and to reduce the expense connected with chronic diseases. With scarce treatment services, the detection of people to be addressed remains a major obstacle, but data-driven approaches are advancing. Digital media may also leverage communications technology to bring about societal impact by using improvements in statistical modeling. (Bryant and Grier 2005). The provision of more effective , reliable healthcare programs is also essential to brand management and customer satisfaction. Nevertheless, clinicians require extremely granular knowledge regarding their patients to meet the pledge of treatment quality. Several organisations have seized up the value of meaningful

customer interactions and have concentrated up customer retention (Lee et al . 2016).

## **9. Balancing potential benefits and unintended consequences of Value-Centered Marketing**

New analytics as well as technologies provide unprecedented possibilities to realize the value-added care promise. They require regular calculation, automation, customisation and rapid exchange of knowledge. Whereas some proponents are hopeful about the possible beneficial effect of the technology transformation in healthcare on disadvantaged customers (Bathija and Bhatt 2018), unintended effect avoidance needs effective pre-exploration and concerted intervention. If properly leveraged, new technology and analytics will render medical organisations too efficient:

- (1) assess and encourage buyers to behave on their interests, what is of considerable significance to them;
- (2) Speak with accuracy about public health;
- (3) Follow a consumer-focused approach with caution.

The resources and skills involved in obtaining and gaining from technical health interventions may often be viewed as being self-evident, but digital medical technologies continue to be created, validated and utilized by customers from disadvantaged communities.

*As well as concerns with incomplete data for disadvantaged groups, the production*

*of EHR data will contribute to affiliation bias (Gian francesco et al. 2018).*

*Many scholars then provided vital opportunities for the growth of health surveillance and data creation (Rich and Miah 2017; Ruckenstein and Schüll 2017).*

## 10. Conclusion

To transition into value-based payment schemes, a value-centric marketing strategy needs to be built to optimize customer choice, specifically adapt to health concerns and provide user-oriented services. Where there has once been an barrier to insufficient quantification, advancement in healthcare technology and analytics allow Value-Centered marketing.

A key market challenge is to grasp digital transition accurately into this modern age. Experts share views on digital reality, fear of digital age and survival techniques, particularly in the field of healthcare. For example , user engagement with mobile devices is continuously changing: wearables and embedded mobile apps have joined digital marketing fields in detail.

From a growing healthcare environment, we have implemented the three Ps of value-centered marketing as an operational structure in order to explain how interest in healthcare can be created and prioritize main innovation areas. Our marketing Value-Centered approach offers actionable advice that will enable consumers, including physicians, pharmaceutical providers and insurance firms, to create trust for multiple stakeholders. After presenting a brief summary of the cutting-

edge state of the art in health technology, we have provided case-specific usage cases for use in Value-Centered marketing

Lastly, the correlation between marketing sciences along with health information will lead health stakeholders into a consumer-oriented culture which seeks positive patient interactions, however vigilance is required to make sure that VCM benefits everyone, even vulnerable populations, are recognized.

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# COMPARATIVE PERFORMANCE ANALYSIS OF SELECT MUTUAL FUND SCHEMES IN TAX SAVER CATEGORY

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## Abstract

The performance evaluation of mutual fund schemes is very important area considering the interest of various stakeholders of Mutual fund industry especially the investors. There are 38 mutual fund houses in India which do offer similar mutual fund schemes for investment. Hence it becomes vital for the asset management companies to perform better compared to benchmark as well as other competitors' similar schemes.

This research is aimed at performing detailed analysis of performance of select mutual fund schemes in Tax saver category (growth plan).

This research study will be beneficial for the prospective & existing investors for making informed decision about their future investment decisions. Also it will help the mutual fund houses especially the asset management companies to compare their

performance with benchmark & other competitors so as to take corrective actions in order to attract new investors & retain the existing ones.

The methodology used for this research

paper is 'Descriptive & Analytical Research'.

This study makes use of various statistical tools like Standard Deviation, Co-Variance, Co-Relation, R-Squared, Beta for achieving its objective. The data is considered for the period of five years i.e. 2015 to 2019.

The benchmark index for comparison of funds' performance is **S&P BSE 100**.

## Key Words

Standard Deviation, Co-variance, Beta, R-squared, Co-relation, Benchmark, Risk, Return

## 1. OBJECTIVES OF THE STUDY:

2. To calculate the various statistical parameters for determining the degree of overall risk in all the select mutual fund schemes
3. To calculate the various statistical parameters for determining the degree of systematic risk in all the select mutual fund schemes
4. To make the peer comparison of the returns of all select mutual fund schemes & the benchmark index.
5. To carry out overall comparative analysis of all select mutual fund schemes with respect to risk & return.

## 2. RESEARCH METHODOLOGY

### 1. Population:

All the Mutual fund schemes in Tax Saver category offered by all the Mutual Fund houses in India. So the population size is 38.

(Source: [www.valueresearchonline.com](http://www.valueresearchonline.com))

### 2. Sample Size:

Overall three mutual fund schemes are taken as sample size

- a. Nippon India Tax Saver (ELSS) Fund
- b. LIC Mutual Fund Tax Plan
- c. HSBC Tax Saver Equity Fund

### 3. Sample Frame:

The names of all mutual funds schemes in Tax saver category are gathered from the list available on

[www.valueresearchonline.com](http://www.valueresearchonline.com) which is the sample frame in this research study.

### 4. Time frame of study:

The data is taken for five years i.e. 2015, 2016, 2017, 2018 & 2019.

### 5. Sampling Technique:

- a. Simple Random sampling which is a type of Probability Sampling is used for selection of the three mutual fund schemes
- b. It's a well-known fact that "simple random sampling removes bias from the selection process & hence results in representative samples".

### 6. Sources of data

Following data sources are used for collection of the required data:

1. The factsheets of the select mutual fund schemes available on official website of mutual fund houses.
2. Website [www.moneycontrol.com](http://www.moneycontrol.com) & [www.valueresearchonline.com](http://www.valueresearchonline.com) which are very much trusted & commonly used website for gathering the data related to stock

market & mutual fund.

## 7. Tools of Data Analysis

- Standard Deviation
- Variance
- Co – Variance
- Co – Relation
- R – Squared
- Beta of a portfolio

## 3. DATA ANALYSIS AND INTERPRETATION

### Data Analysis

#### 1) Nippon India Tax Saver (ELSS) Fund - Direct Plan - Growth Option

#### A. Presentation of the Fund & Benchmark Returns

Table 1: Presentation of fund and Benchmark Returns (Nippon India)

Year	Fund Returns (%)	Benchmark Returns (%)	Fund returns - Benchmark Returns
2015	-2.76	-3.22	-2.06
2016	4.49	3.6	-0.31
2017	47.64	31.08	12.51
2018	-19.69	1.12	-20.75
2019	1.84	9.36	-8.18
<b>Average Return</b>	6.31	8.39	

This table shows that four out of 5 times the fund has underperformed compared to the benchmark index S&P BSE 100 in terms of returns which is not a good sign. Once it outperformed. However the average return of this scheme is considerably less than the benchmark. Overall, prospective investors should not invest in this fund considering the returns provided.

Table 2: Calculation of Standard Deviation of Fund & Benchmark

Year	Fund Returns (X)	DX	DX <sup>2</sup>	Benchmark Returns (Y)	DY (Y-Y)	DY <sup>2</sup>
2015	-2.76	-9.06	82.16	-3.22	-11.61	134.75

2016	4.49	-1.81	3.29	3.60	-4.79	22.92
2017	47.64	41.34	1708.66	31.08	22.69	514.93
2018	-19.69	-25.99	675.69	1.12	-7.27	52.82
2019	1.84	-4.46	19.93	9.36	0.97	0.94
Total			2489.73			726.37



**Calculation for Fund (X):**

$$✓ \text{ Average Return} = 6.31\%$$

$$\begin{aligned}
 ✓ \text{ Variance (V)} &= \frac{\sum DX^2}{N-1} \\
 &= 2489.73/4 \\
 &= 622.43
 \end{aligned}$$

$$\begin{aligned}
 ✓ \text{ Standard Deviation (Fund)} &= \sqrt{V} \\
 &= \sqrt{622.43} \\
 &= 24.95
 \end{aligned}$$

**Calculation for Benchmark (Y)**

$$✓ \text{ Average Return} = 8.39\%$$

$$\begin{aligned}
 ✓ \text{ Variance (V)} &= \frac{\sum DY^2}{N-1} \\
 &= 726.37/4 \\
 &= 181.59
 \end{aligned}$$

$$\begin{aligned}
 ✓ \text{ Standard Deviation (Benchmark)} &= \sqrt{V} \\
 &= \sqrt{181.59} \\
 &= 13.48
 \end{aligned}$$

**Data Interpretation:**

“Standard Deviation is a measure of overall risk of the fund returns. It shows the volatility of returns. Investors ideally prefer lower volatility of returns i.e. lower standard deviation”. Standard Deviation of the Nippon India fund is 24.95 & that for benchmark is 13.48. So overall risk for Nippon India Tax saver fund is much higher compared to the benchmark index i.e. S&P BSE 100.

### Calculation of the Co-variance of the fund

Table 3: Calculation of Co-variance of Nippon with Benchmark

Year	Fund (DX)	Benchmark (DY)	(DX*DY)
2015	-9.06	-11.61	105.21
2016	-1.81	-4.79	8.68
2017	41.34	22.69	938.03
2018	-25.99	-7.27	188.90
2019	-4.46	0.97	-4.34
Total			1236.48

$$\begin{aligned}\text{Co- Variance} &= \sum D_x * D_y / N-1 \\ &= 1236.48 / 4 \\ &= 309.12\end{aligned}$$

#### Data Interpretation:

A positive Co- Variance means that asset returns move together, while a negative Co- Variance means returns move inversely, Co- variance of the Nippon fund is positive i.e. 309.12. This is a positive sign for the investor if the benchmark gives positive & high returns.

### Calculation of Co Relation of the Fund

$$\begin{aligned}\text{Karl Pearson's Coefficient of correlation} &= \frac{\sum D_x D_y}{\sqrt{\sum D_x^2 \sum D_y^2}} \\ &= 0.9194\end{aligned}$$

#### Data Interpretation

“Correlation coefficient signifies the magnitude & direction of the relationship between two variables”. The value of 0.9194 indicates that there exists a very high positive correlation between the fund returns & the benchmark returns. Hence in case of positive returns from the benchmark, the fund also is likely to give positive returns & vice a versa. So it's a positive sign for Nippon India Tax saver fund.

### Calculation of R – Squared of the fund

$$\begin{aligned}\text{R – Squared} &= [\text{Karl Pearson's Coefficient of Correlation}]^2 \\ &= [0.9194]^2 \\ &= 0.8454\end{aligned}$$

#### Data Interpretation:

In investing, R-squared value is an indicator of how much percentage of the variation in fund's returns is explained by the variation in benchmark index return. So in this case, 84.54% of the variation in funds returns is explained by the variation in benchmark index returns. That means, this fund closely tracks the benchmark index S&P BSE 100.

### Calculation of Beta of the Fund

$$\begin{aligned}\text{Beta} &= \frac{\text{R-Squared} * \text{Std. Deviation of Fund} / 100}{\text{Std. Deviation of Benchmark} / 100} \\ &= \frac{0.8454 * 24.95 / 100}{13.48 / 100} \\ &= 1.57\end{aligned}$$

#### Data Interpretation:

“Beta signifies the degree of systematic risk of the fund portfolio i.e. the volatility of returns of the fund returns with respect to the benchmark”. “If the Beta value is 1.2, then it is interpreted that if the benchmark gives a return of 10%, the fund portfolio will give return of 10%\*Beta i.e. 10%\*1.2 = 12%”. Hence from an investors' point of view, the Beta value should be higher if the market is expected to go up. So in bullish market, the investors should prefer higher Beta funds & vice versa.

So In case of Nippon India tax saver fund, since Beta is 1.57, the investors should invest in this fund only if the market is likely to go up in near future.

## 2) LIC MF Tax Plan-Direct Plan Growth Option

### A. Presentation of the Fund & Benchmark Returns of the Fund

Table 4: Presentation of fund and Benchmark Returns (LIC MF Tax plan)

Year	Fund Returns (%)	Benchmark Returns (%)	Fund returns - Benchmark Returns
2015	-3.37	-3.22	-0.15
2016	3.35	3.60	-0.25
2017	39.18	31.08	8.10
2018	0.49	1.12	-0.63
2019	13.13	9.36	3.77
<b>Average Return</b>	10.56	8.38	

This table shows that three out of 5 times the fund has underperformed compared to benchmark in terms of returns which is not a good sign. However the fund has outperformed the benchmark index two times by considerable margin. Prospective investors should prefer investing in this fund considering the overall returns in last five years.

Table 5: Calculation of Standard Deviation of Fund & Benchmark

Year	Fund Returns (X)	DX	DX <sup>2</sup>	Benchmark Returns (Y)	DY	DY <sup>2</sup>
2015	-3.37	-13.93	193.93	-3.22	-11.61	134.73
2016	3.35	-7.21	51.93	3.60	-4.79	22.92
2017	39.18	28.62	819.33	31.08	22.69	514.96
2018	0.49	-10.07	101.32	1.12	-7.27	52.81
2019	13.13	2.57	6.63	9.36	0.97	0.95
Total			1173.14			726.37

### Calculation for Fund (X):

✓ Average Return = 10.56%

$$\begin{aligned}\checkmark \text{ Variance (V)} &= \frac{\sum DX^2}{N-1} \\ &= 1173.14/4 \\ &= 293.28\end{aligned}$$

$$\begin{aligned}\checkmark \text{ Standard Deviation (Fund)} &= \sqrt{V} \\ &= \sqrt{293.28} \\ &= 17.13\end{aligned}$$

### Calculation for Benchmark (Y)

Benchmark values as calculated above are as follows:

Average Return = 8.39%

Variance (V) = 181.59

Standard Deviation = 13.48

### Data Interpretation:

Standard Deviation value for LIC MF Tax plan is 17.13 & that for benchmark is 13.48. So overall risk for LIC MF Tax plan is little higher compared to the benchmark index i.e. S&P BSE 100.

### Calculation of the Co-variance of the fund

Table 6: Calculation of Co-variance of LIC MF with Benchmark

Year	Fund (DX)	Benchmark (DY)	(DX*DY)
2015	-13.93	-11.61	161.64
2016	-7.21	-4.79	34.50
2017	28.62	22.69	649.56
2018	-10.07	-7.27	73.15
2019	2.57	0.97	2.50
Total			921.35

$$\begin{aligned}\text{Co- Variance} &= \sum D_x * D_y / N-1 \\ &= 921.35 / 4 \\ &= 230.34\end{aligned}$$

#### **Data Interpretation:**

A positive Co-Variance means that fund & benchmark returns move together, while a negative Co- Variance means returns move in opposite direction. Co- variance of LIC MF Tax plan is positive i.e. 230.34. This is a positive sign for the investor if the benchmark gives positive & high returns.

#### **Calculation of Co Relation of the Fund**

$$\begin{aligned}\text{Karl Pearson's Coefficient of correlation} &= \frac{\sum D_x D_y}{\sqrt{\sum D_x^2 \sum D_y^2}} \\ &= 0.9981\end{aligned}$$

#### **Data Interpretation**

The value of 0.9981 indicates that there exists an extremely high positive correlation between the fund returns & the benchmark returns. Hence in case of positive returns from the benchmark, the fund also is likely to give positive returns & vice a versa. So it's a positive sign for LIC MF Tax plan.

#### **Calculation of R – Squared of the fund**

$$\begin{aligned}\text{R – Squared} &= [\text{Karl Pearson's Coefficient of Correlation}]^2 \\ &= [0.9981]^2 \\ &= 0.9962\end{aligned}$$

#### **Data Interpretation:**

In this case, R squared value is found to be 0.9962. i.e. 99.62% of the variation in funds returns is explained by the variation in benchmark index returns. That means, this fund exactly tracks the benchmark index S&P BSE 100.

### Calculation of Beta of the Fund

$$\begin{aligned}\text{Beta} &= \frac{\text{R-Squared} * \text{Std. Deviation of Fund} / 100}{\text{Std. Deviation of Benchmark} / 100} \\ &= \frac{0.9962 * 17.13 / 100}{13.48 / 100} \\ &= 1.27\end{aligned}$$

### Data Interpretation:

In this case, Beta of 1.27 suggests that if the benchmark index gives 10% return, LIC MF Tax plan will give a return of  $10\% * 1.27 = 12.7\%$ . From an investors' point of view, the Beta value should be higher if the market is expected to go up. So in bullish market, the investors should prefer higher Beta funds & vice versa.

So In case of LIC MF Tax plan, since Beta is 1.27, the investors should invest in this fund only if the market is likely to go up in near future.

### 3) HSBC Tax Saver Equity Fund Direct Growth

#### A. Presentation of the Fund & Benchmark Returns of the Fund

Table 7: Presentation of fund and Benchmark Returns (HSBC Tax Saver Equity fund)

Year	Fund Returns (%)	Benchmark Returns (%)	Fund returns - Benchmark Returns
2015	0.92	-3.22	4.14
2016	6.02	3.60	2.42
2017	43.84	31.08	12.76
2018	-10.53	1.12	-11.65
2019	8.97	9.36	-0.39
<b>Average Return</b>	9.84	8.38	

This table shows that three out of 5 times the fund has outperformed the benchmark index in terms of returns which is a good sign. Two times it underperformed but overall the average return of this scheme is little higher compared to benchmark index. So prospective investors should prefer this fund considering the returns provided.

Table 8: Calculation of Standard Deviation of Fund & Benchmark

Year	Fund Returns (X)	DX	DX <sup>2</sup>	Benchmark Returns (Y)	DY	DY <sup>2</sup>
2015	0.92	-8.92	79.64	-3.22	-11.61	134.73
2016	6.02	-3.82	14.62	3.60	-4.79	22.92
2017	43.84	34.00	1155.73	31.08	22.69	514.96
2018	-10.53	-20.37	415.10	1.12	-7.27	52.81
2019	8.97	-0.87	0.76	9.36	0.97	0.95
Total			1665.85			726.37

#### Calculation for Fund (X):

✓ Average Return = 9.84%

$$\begin{aligned}
 \checkmark \text{ Variance (V)} &= \frac{\sum DX^2}{N-1} \\
 &= \frac{1665.85}{4} \\
 &= 416.46
 \end{aligned}$$

$$\begin{aligned}
 \checkmark \text{ Standard Deviation (Fund)} &= \sqrt{V} \\
 &= \sqrt{416.46} \\
 &= 20.41
 \end{aligned}$$

#### Calculation for Benchmark (Y)

Benchmark values as calculated above are as follows:

Average Return = 8.39%

Variance (V) = 181.59

Standard Deviation = 13.48

#### Data Interpretation:

Standard Deviation for HSBC Tax saver equity fund is 20.41 & that for benchmark is 13.48.

So overall risk for HSBC Tax saver equity fund is much higher compared to the benchmark index i.e. S&P BSE 100.



### Calculation of the Co-variance of the fund

Table 9: Calculation of Co-variance of HSBC Tax saver equity fund with Benchmark

Year	Fund (DX)	Benchmark (DY)	(DX*DY)
2015	-8.92	-11.61	103.58
2016	-3.82	-4.79	18.31
2017	34.00	22.69	771.46
2018	-20.37	-7.27	148.06
2019	-0.87	0.97	-0.85
Total			1040.57

$$\begin{aligned}\text{Co- Variance} &= \sum Dx * Dy / N-1 \\ &= 1040.57 / 4 \\ &= 260.14\end{aligned}$$

#### Data Interpretation:

A positive Co-Variance means that fund & benchmark returns move together, while a negative Co- Variance means returns move in opposite direction. Co- variance of HSBC Tax saver equity fund is positive i.e. 260.14. This is a positive sign for the investor if the benchmark gives positive & high returns.

### Calculation of Co Relation of the Fund

$$\begin{aligned}\text{Co-Relation Coefficient} &= \frac{\sum Dx Dy}{\sqrt{\sum Dx^2 \sum Dy^2}} \\ &= 0.9459\end{aligned}$$

#### Data Interpretation

The value of 0.9459 indicates that there exists a very high positive correlation between the fund returns & the benchmark returns. Hence in case of positive returns from the benchmark, the fund also is likely to give positive returns & vice a versa. So it's a positive sign for HSBC Tax saver equity fund.

### Calculation of R – Squared of the fund

$$\begin{aligned}\text{R – Squared} &= [\text{Karl Pearson's Coefficient of Correlation}]^2 \\ &= [0.9459]^2 \\ &= 0.8948\end{aligned}$$

### Data Interpretation:

In this case, 89.48% of the variation in funds returns is explained by the variation in benchmark index returns. That means, this fund very closely tracks the benchmark index S&P BSE 100.

### Calculation of Beta of the Fund

$$\begin{aligned}\text{Beta} &= \frac{\text{R-Squared} * \text{Std. Deviation of Fund} / 100}{\text{Std. Deviation of Benchmark} / 100} \\ &= \frac{0.8948 * 20.41 / 100}{13.48 / 100} \\ &= 1.36\end{aligned}$$

### Data Interpretation:

In this case, Beta of 1.36 suggests that if the benchmark index gives 10% return, HSBC Tax saver equity fund will give a return of  $10\% * 1.36 = 13.6\%$ . From an investors' point of view, the Beta value should be higher if the market is expected to go up. So in bullish market, the investors should prefer higher Beta funds & vice a versa.

So In case of HSBC Tax saver equity fund, since Beta is 1.36, the investors should invest in this fund only if the market is likely to go up in near future.

## FINDINGS AND CONCLUSION

### Findings

Table 10: Summary of data analysis & findings

Statistical Tools	Nippon India Tax saver fund	LIC MF Tax saver fund	HSBC Tax saver Equity fund
Average Return	6.31%	10.56%	9.84%
Standard Deviation	24.95	17.13	20.41
Co – Variance	309.12	230.34	260.14
Co – Relation	0.9194	0.9981	0.9459
R – Squared	0.8454	0.9962	0.8948
Beta	1.57	1.27	1.36

The above table represents the summary of this research. The major findings of this research study are as follows:

1. Maximum return is given by LIC MF Tax saver fund while minimum return is for Nippon India Tax saver fund. Hence considering the returns provided, the investors should give prefer LIC MF Tax saver fund the most.
2. The Standard Deviation is least for LIC MF Tax saver fund & highest for Nippon India. Hence, LIC MF is least risky / volatile & Nippon India is highly risky/volatile.
3. Co-variance is highest for Nippon India & least for LIC MF.
4. Coefficient of correlation is highest for LIC MF & its least for Nippon India.
5. R-squared value is highest for LIC MF & its least for Nippon India
6. Beta is positive for all the select mutual fund schemes. It's highest for Nippon India & least for LIC MF.

#### 4. Conclusion

From table no. 10 & the findings, we can conclude that, LIC MF has given highest average returns amongst three funds. It has least standard deviation i.e. overall risk which is a good sign for investors, highest value of coefficient of correlation & R-squared signifying its close tracking of the benchmark index which again is a good sign. Also it has least value of Beta i.e. systematic risk which is again a good sign. It signifies that this fund is least volatile with respect to fluctuations in major parameters of the economy i.e. interest rates, unemployment level, inflation etc. Hence, from the investors' point of view, LIC MF Tax saver plan is the **best bet** amongst the select mutual fund schemes in tax saver category.

HSBC Tax saver equity fund has second best value of average return, std. deviation, co-variance, Karl Pearson's coefficient of correlation, R-squared & Beta value. Hence after LIC MF Tax saver fund, the investors should prefer investing in HSBC Tax saver equity fund.

Nippon India tax saver fund has lot of scope for improvement. It has given least average return & highest value for standard deviation i.e. overall risk for investors. Which is worst case. Coefficient

of correlation is least amongst select three funds so also R-squared value. Beta value for this fund is maximum amongst select funds i.e. 1.57 which signifies maximum systematic risk. This is again a bad sign from investors' point of view. So the investors **should avoid investing in this fund**.

#### 5. Suggestions & Recommendations

From the findings & conclusion the researcher is willing to give following suggestions to the investors:

1. The best fund for investment is definitely LIC MF Tax saver fund as it has maximum average returns & minimum value of overall as well as systematic risk
2. Second best fund for investment is HSBC Tax saver Equity fund as it has given second best average return & its overall as well as systematic risk is second best amongst the select tax saver funds.
3. The investors should avoid investing in Nippon India tax saver fund due to its least average return & maximum overall as well as systematic risk.

From the findings & conclusion the researcher is willing to give following

suggestions to

the fund manager / asset management companies of the select mutual fund schemes:

1. The LIC MF tax saver fund has done really well in terms of managing its risk & return. It should continue to do well so as to attract more & more investors in its scheme.
2. HSBC Tax saver equity fund has some scope of improvement in terms of giving higher returns to investors & managing its overall as well as systematic risk.
3. Nippon India Tax saver fund has very high scope of improvement as it has given least average return & maximum volatility in terms of overall as well as systematic risk. If this performance continues in future as well, the investors will be disappointed & may switch their investment into other tax saver funds.

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# Artificial Intelligence and its impact on the way we live life today

Mrs. Vatsala Manjunath

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## **Abstract:**

*Use of Technology, in every facet of life has turned upside down, the way we perceive things and execute life. There is a stark difference in the way the generation Z is growing up when compared to their predecessors. They have been exposed to fast changing technology from a very young age. Generation Z seems to absorb these changes so well, so much so, that they seem to be fish, swimming in the pool of changes happening around them. There have been many examples of disruptive technologies, which takes the place of the one existing and cause the older ones to become obsolete. One such example of disruptive technology is Artificial Intelligence, where computers or machines could be programmed in such a way that they could replicate the thinking, reasoning and decision making ability of a human brain to provide a course of action or a solution. A variety of tasks like taking decisions, making predictions, which are repetitive in nature, could be delegated to the Artificial Intelligence of machines using Techniques like Machine Learning and Deep learning. Apart from freeing up precious time consumed in mundane chores of decision making, which can be taught to a machine, there are several other benefits which are offered by AI. The various fields in which AI is in vogue is a topic of discussion. Recognizing the need of the hour, a lot of research on areas where Artificial Intelligence, can further be used, needs to be encouraged. The general public is mostly aware of terms related to Artificial Intelligence. Very little research is done in the area of how artificial Intelligence is impacting how humans are living life today. Research can also be done on the awareness of respondents on how Artificial Intelligence works. The current research article focusses on the basics of what AI is and the components of AI, areas in which AI is majorly used, and the side effect of a data overload. A lot of work ought to be done for the progress of artificial Intelligence, specifically in relation to the measurement of awareness and preparedness of the common man to the whole new level of complicated matter, which is served in a simplified fashion on their platter. Those days are not far away when there will be more than a bit of AI in every body's life.*

**Key Words:** Artificial Intelligence, Disruptive Technology, Machine Learning, Deep Learning.

## **I.INTRODUCTION**

AI is a set of technologies that can work independently and also in union with each other to extend the capabilities of a machine to imitate human functioning. Investing in AI would in the

future create great business value. AI would transform the relation between human beings and machines. Machines will enable people to do exceptional work which will create more value instead of mundane tasks. Companies would increase their dependence on AI to understand data better and derive trends and insights.

New AI technologies are being added to the already existing ones at an increasing rate. Not many people understand the ever evolving technologies. These changes will naturally take time for people to get comfortable.

It is definitely a task to keep up to date to the changes happening in the field of AI. AI will soon give power to most of the activities in business processing and change the way we live life and work in organizations.

## **II.WHY ARTIFICIAL INTELLIGENCE IS CALLED ‘ARTIFICIAL INTELLIGENCE’**

The term artificial Intelligence which is also called as machine Intelligence is named so, as the machine has been taught or programmed in such a way that it can deduce cognitive thinking which was earlier done by the human mind. The art of artificial Intelligence is to program a machine to think like a

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human brain and respond to stimuli and follow instructions. Robust functioning of artificial Intelligence is based on huge amount of data, proper instructions given to the machine in question and the programming of the machine to do a required task. With the internet and smart phone becoming one of the bare necessities of life, the data that is generated by its usage is creating a perfect setting for the implementation of AI.

Artificial intelligence is when machines are taught cognitive thinking resembling the humans, and utilization of the cognitive thinking (thinking, reasoning or remembering) to do jobs like language translation, speech recognition visual perception, and decision making based on inputs. Machines are becoming more and more capable of performing tasks that required human intervention earlier. The transformation is so smooth that the end user does not sometimes realize that the technology is operating and not the other way round.

### **III.BIRTH OF ARTIFICIAL INTELLIGENCE**

The birth of artificial Intelligence can be date back to late 1940's and early 1950's. Artificial Intelligence in terms of a technology user can be defined as the voice and non-voice based interactions that can be had with machines .This can be defined as artificial Intelligence at its nascent

stage. The enormous technology jump in the last 30 has happened due to the constant human effort to improve the quality of life. The change that has happened can be attributed to the disruptive technologies that have come in the last few years. Disruptive technology has definitely and significantly altered the way people live their life and the way business is done. There are several examples of disruptive technologies available as on date, but the most popular ones would be Artificial Intelligence , Machine Learning , Internet of things,3D printing , Medical innovations, High speed travel, Robotics, Block chain technology , Autonomous vehicles, Virtual reality and renewable energy.

### **IV.WEAK/ NARROW VS STRONG AI**

Artificial intelligence per se can be broadly categorized into strong AI and or narrow or weak AI . Weak or narrow artificial Intelligence works on an algorithm to simulate cognitive function and are bound by the defined rules and do not have the capacity to respond to something beyond what has been fed in . But they seem to be perfect at performing the task they are designed to do.

Artificial Intelligence uses algorithms which could be explained as a 360 degree instruction manual to a machine to respond to a certain stimulus and a program response to instructions. The machine checks out the instruction manual to give response

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to an instruction and acts according to the response designed in the manual or algorithm. Basically the inputs received are categorized by the machine to find the answer and then give it. It gives the feel of having interacted with a human on the other end. Personalized digital assistants' like Apple's 'Siri', Amazon's 'Alexa', Google's 'Home' are examples of weak Artificial Intelligence.

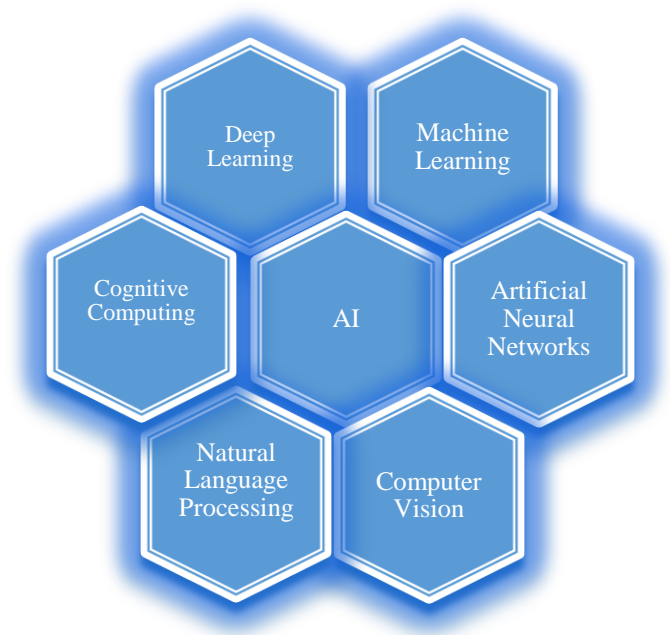
Strong artificial intelligence does not classify the data, but clusters the data and associates the data inputs to perform a function. E.g. one could have a machine hear 'Good Evening', or 'So cold in here' and program it to turn on the coffee machine or a heater in the room. AI could be programmed to turn on the AC, when it hears 'So hot in here'. Getting a machine to play a game would also categorize as strong AI. The computer would not recognize the animation characters, it converts the characters into a bunch of numbers to logically play. Computer playing a game is just an example of strong AI. Getting the machine to execute a function when an instruction is given would be a practical use of strong AI. Example could be in the field of robotics and autonomous cars

As mentioned in the research paper written by Pooja Agarwal, Pooja Yadav , Neelam Sharma Ruchika Uniyal ,Swati Sharma(2013) they have classified the AI applications into two types as 'Classifiers' and 'Controllers' . As per the authors

classifies just classify the data and controllers based on the type of data perform a task.

AI skims through the huge pile of data generated by the human interacting using the internet. AI performs smart searches and collecting text and pictures, tries to make patterns in the data and performs the required tasks based on the learnings from the data processing. Processing vast amount of data generated on a daily basis is one of the most important and major application of AI. There are many revolutionary technologies that cum under the preview of AI, the knowledge of which is essential to understand the functioning of AI.

## V. TECHNOLOGIES USED BY AI



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### ***A. Learning from experience or Machine Learning:***

The capability to develop to automatic learning and improve without being explicitly programmed for is machine learning. A program on that suggests new bags for purchase if you happened to look for a bag on an online site. Machine learning is being applied to life sciences, healthcare and pharmaceutical industries to help in medical image interpretation, diagnosis of an ailment, and drug development.

### ***B. Self-educating Machines or Deep learning***

Yet another fragment of machine learning is Deep learning. It uses Artificial Neural Network, which is a network resembling the neural network in the human brain. An output is determined by multiple neural networks working together. The machine requires a constant check and reprogramming until the correct output is correct. Once the pattern is set the neural network can be used again. One application of deep learning is the Speech recognition by the voice assistants or search engines.

### ***C. Artificial Neural Networks***

Artificial Neural network is the technology that enables machine learning. It uses a perceptron which is the machine equivalent of the human neuron. The human brain consists of a huge number of neurons that create a neural network. The

perceptron creates an artificial neural network. This network helps the machine to identify objects. The machine is taught by giving image training to the computer system, by feeding huge number of images. By processing the huge number of image the system is able to finally identify the object.

### ***D. Making Inferences from the context or Cognitive computing***

Cognitive computing tries to replicate a human thought process in a computer. The cognitive computing strives to archive information processing capabilities and human like behavior. The use of cognitive computing is to improve the interaction between the humans and the machines.

### ***E. Understanding the language / Natural Language Processing***

The ultimate goal of NLP is to teach a computer system to understand human language in the actual context and produce logical responses. An Example to NLP could be a Skype translator, which in real time interprets different languages and helps to communicate.

### ***F. Understanding Images or computer Vision***

Computer Vision uses deep learning and pattern identification to understand contents of pictures. The pictures could range anything between graphs,

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table's pictures in PDF as well as video and text. Patients can also be diagnosed using computer vision

## **VI. ADDITIONAL TECHNOLOGIES USED BY AI**

### ***A. GPU/ Graphical processing Units***

Helps in processing huge data and performing calculations quickly.

### ***B. Internet of Things***

It is the network of devices that are connected to the internet. It would be possible to give instruction to devices using an Android phone. Intelligent data processing is done using advanced algorithms.

## **VII. AREAS IN WHICH AI IS MAJORLY USED:**

Artificial Intelligence is a disruptive technology, has a very wide scope of application. The following could be a couple of examples of Artificial Intelligence that can be encountered in daily slice of life situations. The user of an android phone might not even be aware that the phone that they are carrying has features which involve the use of artificial Intelligence in it. Examples include Face detection, Text recognition, Language translators.

New series of android phones are having a feature of face recognition to unlock the phone. Though there are already a lot of other unlocking methods

like the good old Pin or a pattern, biometric ideas become more convenient and have a novelty to it. This face recognition technology is also used in several apps and can present the face in a different frame. Facial recognition is the ability to recognize a face taking the help of technology. The biometrics of the face from a photograph are taken and matched with the data base of existing faces to find a face. Face recognition technology can be used to improve in store personalization and help in online retail shopping. For example Lenskart uses the technology to scan the users face and a virtual trial of the frames is done. One could also decide whether to purchase a certain dress / outfit by uploading one's picture and using the virtual frame to try the outfit.

One well known application of AI is OCR. An OCR (Optical Character recognition) is a software that can interpret images of hand written characters or printed document convert it into readable text .It aims at reducing the work of manual data entry .One of the practical use of OCR is to convert Hard copy invoices generated into editable soft data, through character recognition. It can also be used to create a soft copy of the doctor prescriptions.

A combination of a smart phone and artificial intelligence has made travel easy even to places where one does not know the native language. Google has upgraded its translation service by

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providing a neural system that translates the entire sentence as compared to the earlier word by word translation. Whether the user is on Facebook or Amazon or Google or Microsoft there is definitely a language translator to your rescue.

Yet another perfect example of the artificial Intelligence application of to the real world is computer vision. Computer vision helps the computer to understand and interpret the visual data better.

In the medical field there is a lot of research happening around Laser – Guided Microbots tracking down and killing tumors located in areas of human body where it is a challenge to get medicine to the site of the disease. Driverless cars that seemed to be a part of horror or Science fiction movies are getting closer to reality, by the day. Though it is AI that drives an autonomous car, the concept of a driverless car itself is as disruptive as AI. Autonomous cars can be the safest option to people who cannot drive a car, otherwise or due to any form of physical disability and will definitely not be subject to human limitations and so many collisions can be eliminated.

### **VIII. FUTURE OF ARTIFICIAL INTELLIGENCE - THE ROAD AHEAD**

The big question is, are we prepared for this explosion called artificial intelligence? Artificial Intelligence in the coming years will push

boundaries and charge ahead creating economic & social value, business employment opportunities. In the world of automation, unmanned drones and autonomous cars would become a norm and create business opportunities. AI is surely going to change the way we interact with our environment.

In the field of Finance, Banking, Insurance, legal advisory services- where machines can scan documents share overview of court ruling, stock maintenance and other fields where a lot of consultation is needed, virtual assistants or chat bots could help and take lead. AI could also help with medical diagnosis and healthcare assistance. Other benefits could include help in research and development and supply chain network.

### **IX. THE SIDE EFFECTS OF DATA OVERLOAD**

The smart phones and human race has almost become inseparable. The end user is not aware of the privacy breach that is happening so smoothly in the day to day life. The user does not think twice about giving permission to Google Maps to access location information. Every day travel movements are recorded making life itself very transparent, so much so that there is very little that is private and not shared.

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The digital footprint is the data trails left by the user of internet. There are two types of footprints. Passive digital foot print where the server of the site, the user visits captures the IP address of the visitor and the data that the user intentionally leaves data online. Every social media activity like blog post, twitter tweets, Face book posts and photos shared on Facebook and Instagram. Even the smallest act of 'liking' something on Facebook get saved in the servers of Facebook. The digital foot print also comes from facial recognition devices

The online shopping done by the user is saved on the server of the site like face book and the sites use the data to pursue the customer to purchase the product. The day is not far when AI and Machine learning combination would tell you that the groceries are almost over and need to be repurchased. They could also give updates on the sale happening on an online site. Using artificial Intelligence and observing the purchase patterns of customers the retailers should be able to give customized offers and offer complementary products based on previous purchase. Predictive retailing would keep a track of the customer before during and after the purchase.

Not only the end user but AI can also help the manufacturer to manager work well. AI systems could also keep track of the inventory in large super markets, where it is important to monitor perishable

goods. There could be innumerable number of examples which one can come up with, where AI has the capacity to make life easy.

It is high time the user gets aware of the data recording that is happening without his or her knowledge and get educated about how and where personal data is used and take charge. With so much of change in such small time it is indeed exciting to think of the times that are coming up. It is going to be interesting to see the magic of connected devices and the human race interacting with machines.

## **X. LITERATURE REVIEW**

**NehaSoni, Narotam Singh, Enakshi Khular Sharma, Amita Kapoor (2020), 'Artificial Intelligence in Business: From Research and Innovation to Market Deployment', Procedia Computer Science, Volume 167, 2020, Pages 2200-2210**

The paper has explored the investment trends in AI. A comparison on the percentage startups in different industrial sectors between the year 2017 and 2018 has been done. Geographical analysis of the percentage of startups in AI has been done for the years 2017 and 2018.

**Vineeth Ravi (J.P. Morgan); Prashant Reddy (J.P. Morgan); Sélim Amrouni (J.P. Morgan); Andrea Stefanucci (J.P. Morgan); Manuela Veloso (J.P. Morgan) (2019), 'AI pptX: Workshop on Robust AI in Financial Services', NeurIPS'19, Canada.**

The paper has worked on a novel Artificial Intelligence framework for modifying and creating documents and insight extraction in natural language from data. The framework could prove

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highly beneficial in for eg financial industry, which generates huge amounts of data.

**Thomas Davenport, Dhruv Grewal, Timna Bressgott Abhijit Guha (2019), 'How artificial intelligence will change the future of marketing', Journal of the Academy of Marketing Science, Volume 48, pages24–42**

The paper works around the impact of AI on transportation industry. How driverless would be the game changer. Driverless cars would lead to a whole range of new AI product, the security systems of the cars being one among them. The paper also lists out the eventuality of AI being embedded in Robots

**Thomas H. Davenport and Rajeev Ronanki (2018), 'Artificial Intelligence for the Real World', Harvard Business Review, January–February 2018 Issue**

The research article focusses on the various fields in which AI is engaged in and the paper attempts at a framework on how cognitive abilities can be built by work places to achieve their goals. It lists business automation process, data analysis and employee and customer engagement as the key areas of business needs, where there is AI potential employability.

**Ann Geisel (2018), The Current and Future Impact of Artificial Intelligence on Business, International journal of scientific & technology research volume 7, Issue 5, May 2018.**

The paper studies the different levels of AI. The paper also studies the potential costs to the usage of AI. It tries to explore the other aspects of AI technology that were not explored earlier. The usage of AI in Marketing, Sales, Accounting and Finance has been discussed.

**Neha Soni, Enakshi Sharma, Narotam Singh, Amita Kapoor (2018), 'Impact of Artificial**

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**Intelligence on Businesses: from Research, Innovation, Market Deployment to Future Shifts in Business Models', Conference: Digits 2018, Indian Habitat Center (IHC), New Delhi, India, Volume: 1**

The paper focused on studying the effect of the increasing intelligence of machines and its impact on the change in behavior of business all over the world. The authors have studied the total investment made by 100 AI start up in the years between 2011 and 2016. The breakup of the 100 AI startups in different sectors were also studied. Top 5 sectors being Core AI, Healthcare, Business Intelligence, Advertising and sales, Conversational AI

**M Pradhan, RK Sahu (2011), 'Predict the onset of diabetes disease using Artificial Neural Network (ANN)', International Journal of Computer Science & Emerging Technologies (E-ISSN: 2044-6004) 303 Volume 2, Issue 2, April 2011**

The survey has suggested that for diagnosis of diabetes, the ANN technique give better results than other diabetes detecting technology. The proposed systems aims to save the patients from giving a blood sample for test . The diagnosis is based on the early stage symptoms.

**Jiixin Luo, Qingjun Meng, Yan Cai (2018), 'Analysis of the Impact of Artificial Intelligence Application on the Development of Accounting Industry', Open Journal of Business and**



**Management, 2018, 6, 850-856, ISSN Online: 2329-3292**

The paper concludes that AI is being used more and more in industrial application. Application of AI to industrial will be the key to problem solving. It is necessary for the universities, enterprises, individuals and the country to work together to bring about an application of the key.

**Robert Kowalski (2013), Twenty-Second International Joint Conference on Artificial Intelligence.**

In the ALP (Abductive logic programming) the author has considered only the normative properties and how it could improve human thinking. The author concludes by saying that it helps in expressing one's thoughts clearly.

**Shukla Shubhendu S., Jaiswal Vijay (2013), 'Applicability of Artificial Intelligence in Different Fields of Life', International Journal of Scientific Engineering and Research (IJSER) , ISSN (Online): 2347-3878**

Various fields of artificial intelligence have been listed and expectations from artificial intelligence in each field is listed. Social challenges have been discussed.

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**Conclusion:** The focus of the current paper is on making the reader aware of the basic terminology involved in the huge basket of artificial Intelligence. The current research is an attempt to simplify the technology that makes AI work. It also discusses the potential future use of the technology. All the research papers review by the author also focus on the same lines. There needs to be more research on understanding the consumer's perspective in different business sectors, like the transportation sector, FMCG sector, Personal Finance and Banking. The awareness level and the consumer readiness for the changing technology can be the road ahead.

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# USE OF GAMIFICATION IN HUMAN RESOURCE

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## ABSTRACT:

At the start of the twenty-first century, there may be major changes in Human psychological science. The usage of games additionally referred to as gamification, maybe a new approach to the latest human resource management. The intention of this study is to assess this game style victimization HR processes, will increase engagement and job satisfaction among employees, likewise on establishing that HR practices respond best to exchange. Most employees don't like HR processes, however, they like enjoying games. Consolidation isn't regarding enjoying games. According to Kim (2015), games produce associate imagined world, totally different from reality, however, the facts of additive games and game components. Highlights of the game on the far side of the normal manner i.e. beyond the traditional way of the game inspire people to act and have a good time, thereby increasing the participation of the facilitator (Kapp, 2014;

Zicher-mann & Merce Cunningham, 2011). Currently, the foremost common gamification programs are within the regions of worker engagement, novelty organization, tutoring, personal progress, and client appointment. Also, the game production observes, like all rising technologies, energies over a cycle of achievement and disappointment.

## KEYWORDS:

Gamification, employee, management, engagement, job satisfaction, motivation, HR

## 1. INTRODUCTION:

The name Gamification has received a lot of care from each educational and commercial researcher similar. The reorganization is a beautiful and efficient manner of the way to increase employee visibility in an organization. It's a positive impact on employee engagement and retention.

Integration into HR is cited because of the application of game technology and

game thinking in non-game situations like business processes and also the surroundings. These mechanics are accustomed to solve issues, interact employees, and are used principally for development, motivation, training, and recruitment. With a Rental arrange - via Recruiter. Reorganization may be a conception that uses the theory of games, mechanics, and game styles to attach digitally and encourage people to realize they are goals.

It's not nevertheless clear if organizations are very implementing gamification in HR or simply the most recent. Today, we tend to believe that social media has brought gamification, however that is not true. Most loyalty programs involve a multi-year consolidation item. Loyalty programs provide farther points once a client makes an honest selection. many shoppers pay hours combining totally different choices to urge those additional points. they are doing not contemplate the value of the additional purpose, they solely play the game. They love the story and wish to win the prize.

They ignore different annoying things they'll think about while not being a

part of the game. The gameplay is probably going to be used for HR visibility as a result of employees are talking a couple of new game or competition in business. Once HR adds something fun to the game, employee engagement will increase. Permitting employees to examine results on-line on the computer network homepage is usually a good thanks to encouraging and interact. Identical policies may be applied to the Corporate Recruitment Website.

The Human Resources Department will use ancient game-strengthening principles to boost employee engagement in several HR organizations. The foremost common strategies are:

- ☐ Competition;
- ☐ Achievement;
- ☐ status;
- ☐ Altruism;
- ☐ Interaction.

People like to compete always. Employees also love to compete. It is the main goal behind the performance management system. Everyone loves to be commended. However, Gamification can add something else

to the program that matters to employees.

## HR GAMIFICATION

The HR Gamification is nice once. HR introduces new technologies. HR measure various clusters wherever everyone seems to be not a technical geek. A little game may be a good introduction to the new technology for workers who distressed to use new processes, procedures, and tools. It makes them feel comfortable.

Recently, additional and additional firms are victimization totally different play technologies, thereby involving workers and dynamical they are

behavior. The use of Game mechanism and game style components in a very non-gaming business practices helps the employers in making a property mechanism of participating workers, and thus making a mechanism for property produce an attractive surrounding for the staff and organizations will devise a bunch bounded policy for workers that flourish goals in groups.

This paper has given a summary of what Gamification is and the way it may be used inside the context of human resource management to possess augmented worker productivity which is able to lead to higher structure performance.



Fig: worker Engagement within the geographic point

Source: digitalaptech.com

## **2. OBJECTIVES**

1. To understand the gamification in human resource management.
2. To check the gamification mechanism.
3. To understand however gamification motivates the staff within the manpower.
4. To understand the advantages of gamification.

## **3. HYPOTHESIS:**

HO: There is a significance to comprehend the gamification in human resource management

H1: There is no significance to comprehend the gamification in human resource management

## **3. RESEARCH METHODOLOGY**

The research methodology used in this research paper is established on the secondary data, which is collected from an existing research paper,

journals, articles, the intern, and websites. In this methodology, we also go through the various objectives for accomplishing the research on the gamification trends in HR. The type of research use in this research paper is a qualitative type of research. The secondary research methodology is a summary of data collected for research from the appropriate secondary data sources.

## **GAMIFICATION AND STRUCTURE OF THE WORKFORCE**

HR ought to consistently consider the gamification choice while presenting another procedure or a technique. It is in every case great to make fun and permit workers to oblige the new instrument at their pace. A smart game expands the consideration and permits workers to talk about the significance of the new options and possibilities. The effect on the permeability of Human Resources in the business is sure. It is a reforming thought particularly in HR, nonetheless, has the

degree to affect multi-disciplinary zones in the business condition

### **GAMIFICATION:**

This is an idea that is especially captivating as it includes a multi-disciplinary point of view that is fit to give information to employees, implement and evaluate policies and guidelines, survey employees dependent on different parameters.

The key components for Gamification as given in the literature are Goals,

competition Goals, competition, and cooperation, time, reward structure, feedback, levels, storytelling, aesthetics, replay, or do more than (8). In the accompanying piece of this area we will talk about how every one of these components can be utilized to connect with engaged employees:

In each game there is a reasonable objective, a goal, of what should be accomplished, this spurs it's players to play the game.

### **EMPLOYEES ATTITUDES TO GAMIFICATION**

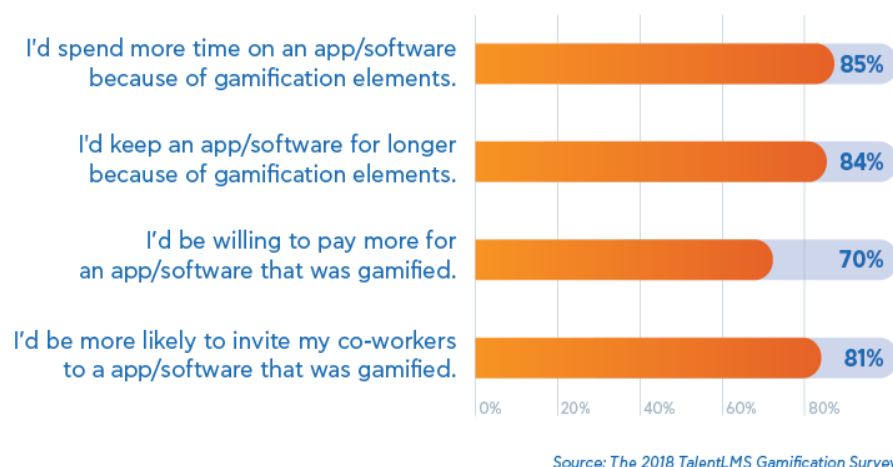


Fig: Employees, inspiration, and games. The ...

Source: talentlms.com

We found that 85% of respondents would invest more energy in programming that was gamified and 84%

would keep gamified programming for more. We additionally found that 81% concurred they were bound to welcome

an associate to gamified programming while 70% showed they'd pay more cash for programming that had gamification components. At that point, we determined the normal of these four scores to get a solitary score for "pleasure". It gives the idea that 80% of representatives appreciate utilizing gamification programming at work.

Much the same as the clear target in the games, individuals at work environment needs away from where the association is going and what is normal from them. Individuals need to perceive how their job fits into the master plan of the business objective, which draws in and spurs individuals to work. Much the same as in a hustling game the two players race with one another concentrated on streamlining the theory's own performance to beat the other player. Much the same as in games where rivalry triggers the enthusiasm of players, solid rivalry at the work environment triggers representatives' commitment and improves there exhibition.

An opposition between project supervisors of various however comparative regions improves the exhibition and commitment of team leads. An organizations should

consolidate assignments of pioneer sheets all through they're organization with the goal that employees will know they're expert standings comparative with they're companions.

Numerous games expect players to accomplish a specific objective together. This creates cooperative energy among players and makes the commitment. Much the same as making groups and sub-groups inside the organization likewise makes a drawing in culture in the association.

For example

Creating a unique group to take care of a particular issue, and the collaboration between individuals of that group can make a drawing in condition for the employees and organizations can devise a gathering remunerating strategy for employees that accomplish objectives in groups.

A large portion of the games are time-limited, this makes a desire to move quickly on the brain of the player, and the outcome of neglecting to do it on time is additionally known.

At the working environment, time-limited exercises, additionally make a desire to move quickly among the players, making an action-oriented,

and result-based condition. The player gets extra rewards for accomplishing achievements; this makes inspiration in players to accomplish a specific achievement. Along these lines, organizations ought to have a reward system that ought to be founded on objective targets. Scoring System, organizations ought to create ways for accomplishing awards and motivators quicker through winning bonus points. [9].

The vast majority of the games have a system for feedback. For example, when the player is finished playing, the individual gets criticism reports of how well they played. A comparative feedback framework should be a piece of each organization. The criticism ought to be given in a positive way, on how the individual can improve his presentation. Much the same as the board can offer feedback to its workers, representatives can offer criticism to they're administration as well. This will bring zones of progress into the notification of the administration. From pilot to full roll-out, employee feedback is fundamental to make an extraordinary user experience.

Making open doors for workers to effectively give feedback will give learning pioneers the bits of knowledge

they have to improve games. For example, make brisk a few inquiry reviews that live inside the game or make a field for workers to leave remarks. Make sure to consistently remunerate those commitments [10].

One of the most significant game structure components is the levels. In the vast majority of the games, when a player clears a specific level, he gets to another level. A similar level system can be applied to individuals in the organization to characterize their positions. This is typically done by making a few levels in the hierarchy. Numerous Games have stories, and the story proceeds as the game progresses. This makes narrating makes the enthusiasm of the players. A similar method can be applied to organizations. Individuals need to know the rationale of doing a specific undertaking. They have to see how this task is identified with the organization's general methodology. It is the task of the administration to make this connection between a person's job and the technique of the organization, the system is the future story of the organization.

Individuals additionally feel associated with the association of they are told the historical backdrop of the organization, How was the business began 30 years prior, and so forth. The Games are improving regarding there feel in every version. Since improved style improves the enthusiasm of players. Companies need to improve the style of the work stations, paint colors of the office. Style assumes a fundamental job in opening up the psyches of the workers. The shade of the dividers or furniture additionally impacts the considering capacity people at work and makes interface or separate in representatives. The aesthetics also incorporates the neatness, and cleanliness factors in the work environment, which are basic for worker essential inspiration.

### **ALL GAMES HAVE OPTIONS OF REPLAY OR DO OVER.**

This makes recognition in the psyches of the players that in spite of the fact that they once neglect to achieve a strategic, doesn't imply that that the players have run out. So also, organizations need to offer space to individuals to retry, on the off chance that they neglect to accomplish an

objective. Also, the key exercises gained from those disappointments ought to be noted and recorded. Rather than sacking someone for doing one thing incorrectly, the organizations will focus on exercises gained from those disappointments. a few enterprises right now urge staff to shape botches and gained from them, notwithstanding, don't allow them to rehash comparative slip-ups. This makes a method of obligation inside the staff and feels motivated.

### **GAMIFICATION FOR EMPLOYEES' MOTIVATION**

Gamification might be a developing pattern in the specialist commitment that utilizes a computerized setting to help staff arrive at sure objectives and goals. The laborer plays a game that gives focuses, status, and compensations as they improve the capacities, objectives, or targets the corporate is endeavoring to satisfy. To support staff various organizations take the help of gamification. It causes them to frame the setting by giving the enlistment instructing the use of a gamification device that permits the specialist to get a handle on the structure vision, targets, and objectives.



#### **4. OBSERVATION AND FINDINGS**

However, gamification got to be used strictly, and also the correct game vogue safeguarded. The analysis wasn't associated to the documentation of current game vogue and game content. Gamification in HR helps the accomplishment procedure of the organization. Gamification helps HR what is more as totally different departments among a corporation

- Increases the efficiency of the organization.
- Gamification in an HR amazingly manufactures the connection between the

partners and farther more the organization.

- Gamification is all with respect to building partner representative's inspiration

to acknowledge structure also as personal goals.

- Trends of gamification zone unit conservative by the progressions happening to the structure set.

#### **SUGGESTIONS:**

People are the most crucial asset of an organization. Gamification is a comparatively new concept. The present study centering on the gamification effect on HR. Behavior varying gamification impacts social communications or even the health of the person. This type of gamification endeavors the person to form new behaviors (Werbach and Hunter 2012). Gamification aids companies to charm the care and curiosity of folks in their trademark and exposed positions. So, HR should concentrate on these areas.

#### **5. CONCLUSION:**

In conclusion, gamification is a novel topic. With the visage of the twenty-first century close by such a lot of social, cultural, political and technological shifts they are collectively a significant shift inside the human psyche and approach of thinking that drives they are behavior and responsiveness to positive conditions that HR enforced on them by external forces or that HR generated and driven by they're internal stimuli. The game vogue components could also be used to manufacture a culture of learning and growth of the employees. 80% of representatives appreciate utilizing gamification programming at work.

Gamification could also be a strategic tool for any organization to grow in a very stylish and dynamic business setting. It'll improve structure culture, reveal talents, foster innovation, and engagement. lastly, gamification could also be a really dynamic, progressive, useful, and methodology tool that has applications that flee on the so much aspect the hour operate of a corporation which can cause dramatic changes which can impact but businesses operate at the instant and inside the on the brink of future. Overall productivity and skill of a corporation can increase with the use of gamification. So, gamification *“is the hot new buzzword in HR”*.

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# **An assessment on “Product Placement” as a promotional strategy in Bollywood movies**

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## **Abstract:**

Product placements have always been used as an influential tool by the marketers for increased exposure and generating interest amongst the latent audience. This promotional strategy is leveraged by the marketers, in a way, including the brands in different popular media vehicles. This paper tries to assess the potential of placement as a strategy specifically in Bollywood movies, its possible benefits and risks associated and various types & strategies incorporated.

**Keywords:** *Product placement, Media vehicles, Filmed entertainment, Bollywood movies*

## **1. Introduction:**

In today's market where marketers are using increased brand proliferation and implementing creative methods to reach their large and fragmented target audience such as Internet marketing, social networking, mobile marketing,

using blogs, etc there needed something which is an exception yet superior than all this mediums, which a customer don't feel to be interfering, which they watch yet are interested in it and this is when product placement comes in the picture.

Over decades brand inclusion as a strategy is been used in the entertainment industry but it is only now that the concept has garnered eyeballs and is largely accepted and utilized by potential marketers. Brand placement is a powerful tool for the new age marketing which reaches large audiences in a cost effective way. It provides an opportunity to the marketers to acquaint the customers with different brands and product lines through different media and entertainment vehicles.

## **What is Product placement?**

Product Placement (PPL) refers to placing a brand, package, a firm or any other merchandise in an entertainment medium for promotional purposes. Generally the basic reason behind placing these things is to create positive feelings towards the brand being advertised, increase recall for the brand which in turn may result in immediate recognition at the point of purchase. To intensify the visibility of a brand in a competitive environment where there are end no. of companies offerings product placements is a most sought after concept. Through product placement a rigorous attempts are made to develop a positive and strong connection between the viewer and the brand placed which in turns provides explanation on the purchase decision. Viewers also get a real picture about the product on the basis of the characters using, referring and approving it. Research has revealed that audience likes watching a product placed because of different factors attached with it like realism, association, familiarity and character attractiveness.

Product placements differs from celebrity endorsement. Celebrities

endorse products and brands which generally come in breaks during a television program or in cinema halls. The effectiveness of a commercial has been reduced due to the zipping and zapping effect ultimately putting companies at stake. To nullify the zipping and zapping effect of commercials product placement as a concept evolved. Other reason being commercials at the cinema halls were generally found to be of low involvement. Brand placement provided an opportunity to the marketers to reach a very large audience with high involvement in a very natural ongoing process of watching a movie and the brand included in the plot without disturbing the audience interest.

### **Product placement defined**

According to Balasubramaniam (1994) “Product placement can be referred as paid message with planned and unobtrusive entry of brands in a movie or television program meant to influence the audience for promotional purpose”.

Steertz (1987) defines product placement as “the inclusion of a brand

name, product package, signage, or other trademark merchandise within a motion picture, television show, or music video”.

Ong and Meri (1994) defines it as “The practice of arranging for brand name goods to make prominent, paid for appearances in films, television programs and other entertainment programs”.

According to Baker & Crawford (1995), “The inclusion of commercial products or services in any form in television or film productions in return for some sort of payment from the advertiser”.

Entertainment and Resources Marketing Association (2004), “Product placement is a practice of integrating specific product and brands into filmed entertainment”.

Falkow (2010) is of the opinion that brand placement consists of a company producing some engaging content with the motive of selling something. The brands are placed intentionally as a commercial content in a non-commercial setting, which is, created through the blend of advertising and

entertainment (Ginosar and Levi-Faur, 2010).

Brand placement incorporates involving the audiences in the process of brand exposure in its natural setting in a media vehicle (Panda, 2004; Cebrzynski, 2006)

Product placement provides exposure to the latent target audiences by portraying the brands being consumed or used in a real setting by including it in a popular mass media (Stephen and Coote, 2005).

### **Product placement strategies**

Shapiro (1993) gave four types of Product placement which is used in a movie. They are

a. where there is clear visibility (product/brand name shown) of the brands placed, the type of placement is called **implicit PPL** example: In Rab ne bana di Jodi movie **TagHeur** a reputed watch brand is shown in a hoarding above the main lead when the main lead shahrukh khan is delivering dialogue. b. Used in a scene example Ranbir Kapoor wearing a **RayBan** sunglasses in Anjana Anjani movie without mentioning anything about it

or **coca-cola** in movie Taal; c. has a spoken reference or called as Integrated explicit PPL example Katrina Kaif verbally taking the brand name “**Complan** girl” in movie Mere brother ki dulhan and d. provides demonstration and verbal mention by a main star example Hrithik Roshan telling the benefits of drinking **bourne vita** in koi mil gaya.

D'Astous and Seguin (1998) gave one of the methods of classifying product placement on the basis of combination of integration and explicitness.

They classified it in three categories viz. **Implicit PPL:** In this form of placement the firm or the product is existent in the plot of the program but no formal mention of it is done. It plays an inactive and contextual role. No demonstration or verbal mention is made and only a logo, brand name or firm's name appears

**Integrated Explicit PPL:** A placement is integrated explicit if there's formal mention of brand or the firm and it's used in the plot of the program. This plays an active role because mentioning about a brand catches attention of the audience making them aware about it.

It is beneficial over the former type because audiences are aware about and demonstrated the attributes and benefits of the product.

**Non Integrated explicit PPL:** is where the brand or the firm is formally mentioned or shown but is not included in the contents of the program. In this the sponsor name can be acknowledged at the beginning, middle or end of the program, for ex. in a form of media partners or sponsorers.

Unlike the former authors, Russel (1998) have been classified along three dimensions: **visual or screen placement, auditory or script placement and plot connection or story line placement.**

The visual dimension or screen placement deals with the appearance or visuality of the brand on screen depending upon the number of times brand been displayed on screen or the style in which the camera shots been done so on and so forth. The second dimension verbal or non verbal placement depends upon the context in which a brand is mentioned, factors influencing the occurrences, the tone of

the voice, the accent, dialogue delivery style, audience connection with the endorser speaking at that time. Plot connection refers to the degree of integrating a brand in the negative or positive plot.

### **Product Placement: Types**

- **Corporate placement:** To improve the reputation of a firm or company. Example -Taj Hotels, Hotel Marriot to show parties, or celebration in a movie. Lenovo used in game shows like KBC, Samsung Tablet used in Reality shows like Roadies.
- **Generic Placement:** To demonstrate or use a product without mentioning the particular brand name. Ex: RayBan Sunglasses and Shades used in all the movies, Apple desktop or iPhone.
- **Service placement:** To present a public or private institution. Showing particular Bank or a restaurant in a movie. Example – showing McDonald in the movie do dooni char.
- **Idea placement:** To

incorporate facts and figures, opinions or statements in a plot, discussing any forthcoming movie or any upcoming television serial in a reality show or daily soaps. Example – Celebrities come in reality shows to indirectly promote their films.

- **Historic placement:** To demonstrate a traditional brand which is serving the public from a long time.
- **Negative placement:** To portray a product in a negative context. For Example a Samsung mobile used as a bomb or Jet airways shown as crashed in some plot in the movie. This is generally unintentional and is only to justify the plot.
- **Innovation placement:** To introduce a new product. Ex Swift Car was introduced in the movie Bunti aur Bubli and Maruti Suzuki Ertiga in Mere Dad ki Maruti.

### **Product placement practice: Risk associated**

- **Exposure:** Unless there is a considerate exposure to the



placement or unless the camera zooms in, the placement has chances of not being noticed.

- **Limited Appeal:** It can't be enumerated or described in a detailed manner in other forms.
- **Ethical concerns:** Sometimes viewers might feel it unethical to be incorporated or some ethically charged products might not be taken positively by the audiences thus hampering the brand & the organization.
- **Competition:** There is immense competition between the brand marketers to get their brands embedded in an entertainment medium. For e.g. the movie "Sultan" had eight brands and thus one brand had to compete with other seven for getting noticed and recalled.
- **Clutter & wear out:** Because of immense competition and inclusion of too many brands the possibility of getting it noticed and remembering gets lessen.
- **Negative placement:** If a brand is integrated with a negative plot, it may get perceived in a negative way.

## Benefits of product placement

Product placement due to its unique and diverse strategies have many advantages to be used as a marketing tool, the social nature being viewed in and lack of clutter unlike other forms of advertisements (Dunnett & Hoek, 1996). Belch and Belch (1999) describes the benefits to be frequency, greater exposure, source and product association, audience and source association, other media support, low cost and recall. Because of these benefits product placement in Bollywood movies is heightened in last decade and we can see at least five brand placements in each and every movie. Media clutter, zipping and zapping effect, audience low involvement in commercials during break are the basic reasons for the popularity of product placement among marketers and researcher to study about the prevalence. This concept is gaining utmost importance because of the following advantages associated:

If the placement strategy is efficient then the audience will notice the products. Audiences come to watch a film out of their own interest and when they are

embedded in a film plot or television scene they have no option but to notice products.

- Frequency –A viewer watches movie once or sometimes more than once and thus whenever they watch it get exposed to the brand
- Product recall intensifies due to wide coverage and multiple exposures.
- Low Cost compared to above-the-line methods of advertising or celebrity endorsement.
- Unlike advertising, it is not interrupting and hence is less obtrusive. Product credibility increases when associated with a reputed movie star.
- It helps in building national recognition as it reaches mass markets with greater frequency and longer time.
- Building corporate image through products awareness among the mass market. Promoting a brand with most successful films and TV programmes.
- Advantage of celebrity endorsement by making the

celebrities use the product in the movie which they are endorsers of.

### **Product placement in Bollywood movies**

In the early decades, Product placement was not that prevailing in Bollywood films as is seen in today's cinema. One of the classic examples of product placement in the early 1970's is the "Rajdoot" motorcycle featured in the movie Bobby. Along with the movie, the brand also gained popularity among the youngsters at that time. Since then till the movie Bunty aur Babli (2005) in which Maruti launched its car Swift, Bollywood had not experienced a huge amount of product placement. But in this era almost all the films have in it products placement because of the commercialization of movies on a wide range from movie Taal where the leads were often seen implicitly using Coca Cola till date.

Bollywood film industry is the biggest film producing industry offering huge production output of approx.1000 films a year compared to Hollywood. Indian consumers cater a large audience eager of consumption, are sophisticated and

information savvy. In the last ten years MNCs have eyed on the potential of this industry to reach a diverse and latent target audience. Films are a part of Indians daily lives and thus grabbing such opportunity is what reputed brands Zandu Balm and Fevicol did by introducing a new concept of song placement.

### **Bollywood and Indian Culture**

group loyalty also influences the selection of particular brand. Indian audience is emotionally attached with the onscreen actors and looked upon them as a source of reference for ongoing trends and fashion. Because of source attractiveness and likability the

If framed in Hofstede's cultural dimension model (2001), Indians are collectivistic rather than individualist as the individuals are influenced by the norms of groups and collectives. They look upon celebrities as a reputed figure and thus in movies seeing them using a product or explicitly announcing it is of greater potential and effective. In

probability of conversion from seeing to buying a product increases providing an added benefit to the firm whose product is placed in a movie.

**Table-1.1 - Products placed in Bollywood movies from the early century**

Movie	Year	Product integration in the scene
Shree 420	1955	Raj Kapoor comes to Mumbai for the first time and a large Coca Cola banner was placed right above his head.
An Evening in Paris	1967	The protagonists are seen carrying coca cola everywhere they go
Koshish	1972	A crate of Coca Cola is placed right beside the central character in a scene
Bobby	1975	The motorcycle famously started getting recognized as bobby motorcycle after the movie where the protagonist is seen riding it in a song

The brands in *table 1.1* were placed non-monetarily. The brands started getting placed for money only in 1990's.

**Table 1.2 Commercialization of product placement post 1990's**

<b>Movie</b>	<b>Year</b>	<b>Products Placed</b>	<b>Movie</b>	<b>Year</b>	<b>Products placed</b>
Jo Jeeta Wohi Sikandar	1992	BSA SLR	3 Idiots	2009	Air India , Airtel , Fortis Hospitals, Mahindra Flyte, Pepsi's Aquafina Samsung Mobiles , Van Heusen ,Volvo
Dilwale Dulhania Le Jayenge	1995	Canned Stroh's	Mere brother ki dulhan	2011	Complan
Taal	1999	Coca-Cola, Thumps Up, BMW, Screen Magazine, Sony Cam, Coke, Nescafe, MTV, BPL, Honda	Mere Dad ki Maruti	2013	Maruti Ertiga
Koi Mil Gaya	2003	Karizmaa, Hero Honda	2 states	2014	Sunsilk , Yes Bank
Baghban	2003	Ford Ikon, ICICI Bank, Tata Tea	Piku	2015	Amul, Syska, Himalayan Water, Priya Gold snakker, Jaypee Greens,Mitashi
Hum Tum	2004	Times of India Group, Lays	Sultan	2016	Astral pipe, Force motors, Flair pens, Relispray, Escorts

					tractor, CP plus, Videocon dth, Paras ghee
Khakee	2004	Thumps Up	Toilet	2017	Honda shine, Ape truck, Ralco tyres, Astral Pipes, Kajaria Tiles, Ebay.in, Dainik Jagran
Dostana	2008	Verve			



**Anushka Sharma uses Canon equipment in Jab Tak Hai Jaan**



**Shah Rukh Khan enumerates the features of Nokia Lumia in Chennai Express**



**Scene from Mere Dad Ki Maruti**

## 2. Conclusion:

Product placement is widely used in the modern times as an effective measure of marketing communications method. Product Placement has emerged as an effective promotion tool to the advertisers and the once not so popular tool to marketers has now become a feasible venue. This strategy has evolved over time and will flourish in the years to come considering the benefits associated with it. A traditional television ad or radio ad gets perished soon after it's viewed or heard but products placed in a movie, once placed, can be retrieved for a longer period of time. This practice got recognition and commercialization in Bollywood movies only after the era of 1990's, from then to now, this strategy has garnered quite an eyeball from the marketers. Brands and Bollywood has always aligned itself famously as it gained popularity because of the diverse audience it cater to , both the producers and advertisers foresee it a long term benefit. Concluding, the review suggests that this strategy, if planned and executed in a creative and entertaining way may turn out to be an effective tool as it gives an opportunity to cater to the fragmented Indian audiences in a most cost effective way.

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# **Artificial Intelligence (AI) Impact on Consumer Buying Behavior regarding Internet Shopping**

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## **1. Introduction:**

In the “olden days,” we go to a shop, see things to purchase, possibly converse with a business right hand and afterward settle on a choice. That implied it was generally simple to consider the brain science of that buying design. Presently, however, we do these things, in addition to we take a gander at item sites, we go to correlation locales, we may visit in discussions, we'll ask our companions on Facebook and we may look at things with a scope of contenders. We may likewise hear some out applicable web recordings and we could even partake in an online course about the thing we need to purchase.

For any retailer, this is a main problem. A significant part of the exploration action attempted by buyers is currently done outside the bounds of their store. That implies the typical sort of knowledge a sales rep could use to make sure about a buy isn't accessible. Moreover, regardless of whether the customer does everything on the web, they likely could be affected by observing different items in reality or visits they have made to physical stores.

The Indian e-commerce market is expected to grow to US\$ 200 billion by 2026 from US\$ 38.5 billion as of 2017. Much growth of the industry has been triggered by increasing internet and Smartphone penetration.

Individuals today can shop actually wherever in no time, be it their workstations or homes, and in particular, whenever of the day at their recreation. The online market space in the country is burgeoning in terms of offerings ranging from travel, movies, hotel reservations and books to the likes of

matrimonial services, electronic gadgets, fashion accessories and even groceries.

Buyers are currently assessing every item and administration on a desire scale that is entirely unexpected from what it was years prior. Likewise there is the means by which is, in any case, additionally some degree of progress that has occurred in the center practices that buyers are appearing, while web based shopping today.

## **Following are a few practices of buyers in web based shopping.**

1. They look for moment goal of issues
2. They are available to different brands
3. They exhibit their aptitude
4. They worth online encounters
5. They search for sentiment

Artificial Intelligence(AI) has been consistently impacting various enterprises all through 2017-18, improving the manner in which organizations do certain procedures. Nonetheless, research has demonstrated that its greatest effect has been on the buyer.

Comprehending all the data and perceiving how AI is influencing consumers will bolster associations and promoters to stay in control. The more you consider your consumers and how they continue, the more you can change your business and advancing methods with the objective that you give them a more noteworthy measure of what they need.

## **2. AI in e-commerce:**

Artificial Intelligence helping web based business organizations draw nearer to their buyers. With the offices of AI, internet business stages today can use huge datasets in regards to buyer conduct and utilization

designs. Computerized reasoning self-learning calculations can make customized shopping encounters for online buyers.

#### **Features on AI fueled E-Shopping:**

1. Real-time item focusing on
2. Visual pursuit
3. Voice Powered Search
4. Assortment Intelligence Tool
5. Conversational trade

#### **3. Importance of the Study:**

From this exploration internet business can get the buyer see towards web based shopping. Buyers can get more data and information about the items with no issue through Artificial Intelligence applications like large information, design acknowledgment and bots and so on.

#### **4. Review of Literature:**

**Shyna K and Vishal M (2017)** Studied “Artificial Intelligence in E-Commerce” Author features the job of Artificial Intelligence reasoning in internet business and its application in various zones of online business. Computerized reasoning has the incredible capacity to procure and examine enormous volumes of information and give choices to activity. Web based business is currently receiving this innovation to recognize designs dependent on perusing, buy history, credit checks, account data and so on. This information gathered at that point structure the premise of making redid suggestions for every customer. Google and Microsoft are as of now putting into new AI activities. Various web business associations have started completing different sorts of AI to all the almost certain understand their purchasers, and give an improved customer experience.

**MeenakshiNadimpalli(2017)** Discussed about “Artificial Intelligence – Consumers and Industry Impact”. Author talks about the view of buyers with respect to Artificial Intelligence reasoning and outlines its impact in retail, healthcare, crime investigation, and employment.

**SavicaDimitrieska, Stankovska and Efremova(2018)** studied“Artificial

Intelligence and Marketing”. Author found in the next years, advertisers can expect more noteworthy AI sway, through increasingly wise pursuits, more astute promotions, refined substance conveyance, depending on bots, kept getting the hang of, forestalling extortion and information penetrates, assessment investigation, picture and voice acknowledgment, deals figure, language acknowledgment, prescient buyer administration, buyer division, and so on.

**S Balasubramaniam(2018)** studied “Artificial Intelligence”. Author examines at the different features of what is AI, and how if at all will it sway innovation, employments, economy and fate of humanity as we get progressively associated and advanced in varying backgrounds.

**Girish Punj(2012)** studied “Consumer Decision Making on the Web:A Theoretical Analysis and Research Guidelines”. Author studied that customers can possibly settle on better quality choices while shopping on the web. In any case, regardless of whether such potential is being acknowledged by most customers is an uncertain issue. Subsequently, the motivation behind this exploration is to see how (1) certain highlights of electronic situations favorably affect the capacities of buyers to settle on better choices, and (2) recognize data preparing procedures that would empower customers to settle on better quality choices while shopping on the web. A cross-disciplinary hypothetical examination dependent on builds drawn from financial aspects (e.g., time costs), figuring (e.g., proposal operators), and brain science (e.g., choice methodologies) is led to recognize factors that possibly impact choice quality in electronic conditions. The exploration is significant from a hypothetical point of view since it analyzes a significant part of online buyer dynamic, to be specific, the effect of the electronic condition on the capacities of buyers.

#### **Ways by which AI Will Influence**

##### **Consumer Behavior:**

Comprehending all the data and perceiving how AI is influencing customers will bolster associations and sponsors to stay ready. The

more you consider your customers and how they continue, the more you can alter your business and advertising systems with the goal that you give them a greater amount of what they need.

### **1) Search Engines utilization by Consumers:**

Completely normal sites will radically change purchasing conduct and choice. We see the normal spend of a purchaser for every meeting essentially expanding with these sites. Normal locales take buyers through an a lot more brilliant channel, permitting them to purchase before client fatigue begins to give up or the client gets diverted.

### **2) Consumer Loyalty:**

Studies have demonstrated that 49% of customers would come back to an online area if AI was available. The client is matched up with appropriate hosts and postings, just as encounters and environs that will improve their remain. With assistance like this, the buyer has little motivation to shop somewhere else next time they need a break.

### **3) Convenience of Consumers:**

AI is opening up a spic and span universe of potential outcomes that will make the shopping experience quite a lot more helpful for the purchaser. This implies organizations need to stay aware of patterns.

### **4) Use of Speech Recognition by Consumers:**

Most of voice search clients are restricted to gadgets like Amazon Echo right now, which they use to perform various tasks. Be that as it may, an ever increasing number of shoppers are utilizing discourse acknowledgment search to get data all the more quicker and exact.

### **5) Consumer Trust towards Brand:**

The most effortless path for brands to manufacture trust with buyers is by offering a remarkable measure of significant worth as a byproduct of their shoppers' subtleties. This is the place AI comes in. As we have seen from any semblance of Google Now, purchasers trust AI-driven items that customize the experience while offering a massive measure of significant worth.

### **Conclusion:**

AI is the path forward, both for businesses and consumers. Businesses are executing the innovation, buyers are responding to it, and businesses are then responding to the buyers response. The final product is more prominent buyer fulfillment and more deals for the business. In the event that your business crunches the information and makes the correct moves, your relationship with your buyers can possibly go off the graph.

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# STUDY ON INDIAN TWEENS' ENGAGEMENT ON DIGITAL PLATFORMS AND DIGITAL TECHNOLOGIES

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## Abstract

The Phenomenon of Tween Consumerism is not new however very less study is done on how Tweens' react and engage on various Digital Channels. Tweens are a complicated bunch consumer group who are considered as not too young to be called Kids and not too old to come in teenager category. Not only this demographic who ages between 9 to 12 is feisty, opinionated, honest, sharp, cynical but as per a report by NRF, 87% of parents surveyed say their children influence their purchase decisions. Tweens are now one of the fastest-growing online audiences, and are spending more time online. This paper tries to gauge the preferences of tweens in aspect of Digital Channels, Digital Platforms and also the Technologies i.e the popularity of Devices.

## Introduction

For marketing and advertising industries, internet brought enormous possibilities as it is nowadays a vital tool in promoting, contacting and finding new business partners (Philip A. Dervan, 2016) And with time there has been a paradigm shift in the view ability of Audio Visual Medium of communication. Off late it is seen that kids are keener to spend their time on Tablets, Mobiles and Laptop versus just watching TV. They prefer to engage online instead of just watch TV mindlessly. And now due to quarantine and online schooling the exposure to online medium has increased. Even when parents are concerned about effective screen time utilization they understand that there is no going back. Every tween has a Laptop or a Tablet or a

Phone on which the online time is fragmented between completing their homework by either logging into their School's ERP or just plain surfing for entertainment or playing online games.

## Literature Review

"Tweens" is a subdivision or a subset consumer fragment of Teen (Seybold & Lindstrom, 2003; Siegel 2004). The section is characterized via age and the thought depends on the possibility that these youngsters are "in-be-Tween" adolescence and teenage (Cook and Kaiser, 2004). This fragment is also commonly known as "Pre-Teen", "Tweenie" or "Tweenage" (Dibley and Baker, 2001), (Grant and Stephen, 2005).

(Arthur and Moore 2006) detailed 5 main discoveries which add to comprehension of why tweens embrace intuitive technologies. These 5 discoveries are: i) the chance to communicate their personalities, ii) social cooperation, iii) instantaneousness and consistent diversion, iv) revelation, and v) the capacity to make and record. These 5 qualities underscore youthful buyers' mental thought processes in embracing IT and they are keys to advertisers effectively coordinating explicit brands of items into the current social and scholastic systems youthful customers are keeping up by means of IT. As indicated by duGay (1996), Gabriel and Lang (1995), and Giddens (1991), utilization for teenagers can be seen as a methods for

selfexpression, development of individual character, and inventiveness. The covering attributes of IT utilization and utilization of different merchandise could be utilized to effectively explore this new showcasing environment by making messages that really address these qualities. "By understanding the qualities that drive youthful purchasers' relationship with the IT they use, advertisers can make all the more convincing

procedures for their brands inside these intuitive spaces" (Arthur et al., 2006).

### Objectives

The main objective of this paper is to

- To explore the most popular Digital Marketing Channels amongst Tweens
- To study how Tweens engages on various digital technologies or platforms.

### Sampling Process

*Table 1.1 Total Sample Size*

Place	Population	S.D	Sample Size
Mumbai	18,394,912	25.20	885
Delhi	16,349,831	16.25	665
<b>Total Sample Size</b>	<b>1550</b>		

*Source: Population Census 2011 Dte. Of Census Operations Govt of India*

Total Twenty questions were selected on the reliability parameter and also validated through Cronbach's alpha test were performed.

*Table No 1.2 Cronbach's alpha Test*

Cronbach's Alpha	Cronbach's Alpha based on standardized items	N no of items
.808	.796	20

### Data Analysis

The present study is an exploratory study which describes various factors, which are critical in understanding the Tween's Preferences towards Digital Marketing Platforms and Technologies. Secondary data are gathered from different accessible sources through work area research including writing overview and alluding e-libraries and other accessible data from different distributed and unpublished reports, Journals, books, papers and so forth (counting databases like Ebsco, Pro-mission, India Business Insight Databases and others). Primary data was collected on basis of stratified Random Sampling from two

regions of India, Delhi NCR and Mumbai as study by Internet and Mobile Association of India (IAMAI) uncovered that Mumbai happens to be at the top with 12 million internet clients and Delhi procures the second situation with 8.1 million internet clients.

### H01 - The Digital Marketing channels do not affect the Product Preferences of the Indian Tweens

The Chi-Square test has been applied and the calculated value is .000 which is

significantly lower than the p value .05, which evident that the null hypothesis has been rejected and alternate hypothesis which is the Digital Marketing Channels affect the product preference of Indian Tweens accepted.

Table 2.1 H1 Chi-Square Tests					
	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.733E2 <sup>a</sup>	1	.000		
Continuity Correction	271.162	1	.000		
Likelihood Ratio	383.439	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	273.126	1	.000		
N of Valid Cases	1491				

### H02 - There is no difference among the means of Indian Tween' Demographic characteristics (Age & Gender) and the perceived amount of usage of digital devices

The Mean of Indian demographic tween's demographic characteristics (Age & Gender) and the perceived amount of usage of digital

devices has been tested through T test and while computing the significant value is less than p value of 0.5 hence the null hypothesis stands dismissed and alternate hypothesis is agreed upon which clearly is indicating that there is significant difference among the means of Indian Tween' Demographic characteristics (Age & Gender) and the perceived amount of usage of digital devices.

Table 2.2 H2 One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Gender	53.536	1490	.000	.65795	.6338	.6821
Age	92.191	1490	.000	2.25956	2.2115	2.3076
Device use	84.587	1490	.000	1.27901	1.2493	1.3087

## Conclusion

98.8 % respondent answer yes they use Internet on regularly wherein the highest percentage for the respondent was 62.1% who said they use 4-5 times in a week and 31% said they use it several times in a day. The respondents confirm that for School work they prefer working on Laptop however 79% did agree that Mobile device is most popular amongst them. it was observed that gender and age play vital role in usage of digital devices, owever it was subjected to parent's permission and the time constraint. It can be said wih the help of research that Choosing the Right Vehicle and Media Platform is important in this case and Tweens respond to only specific message and creative content and they spread out in their inner circle very rapidly. So choosing a brand ambassador will be a crucial in this whole process.

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# **A Comprehensive Study on Newer Trends in Recruitment Practices With Reference To Retail Industry**

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## **ABSTRACT :**

*One of the most important part of hiring process is sourcing talents. It lays a foundation for the successful staffing as it will identify in advance the talent pool who eventually will turn out to be potential applicants. For any organization an effective sourcing drive improves the quality of applicant pool and also decreases the complexity of assessment and selection system since more candidates would be good. No doubt that recruitment is a great deal of preparation both from organization and applicant perspective. These organizations are certainly viewing it as a strategic arena to ensure that they are getting competent employees. The present study aims at exploring the new methods, sources and techniques for hiring employees in retail industry. For this purpose Human Resource managers associated with retail firms were interviewed to find out most preferred, prospective and effective methods to staff their organizations. The role of recruitment contributing other aspects of organizational effectiveness and the evolution of recruitment in nutshell is also discussed by reviewing the literature with respect to various similar industries.*

**Key Words : Alternate recruitment, employee referrals, methods of recruitment, recruitment strategies , retail HR .**

## **1. Introduction :**

Recruitment is defined as a process of finding and attracting capable applicants for the employment. This process resumes with seeking new recruits and ends when their applications are submitted. The outcome is to form a pool of applicants from which potential new employees can be chosen. It is rightly said that recruitment is the first contact made by the company with the future would-be employee. Through this they become aware of the company more closely and also the nature of jobs that could be offered. There is a high competition in recruitment amongst organizations, since they compete for the same employee and for similar positions. When vacancies are more than the candidates suitable to fill the position in the job market candidates can have a better control over which organization they want to join. The moment organizations decide to enter new markets either for sustainability or operate in global market, it also mandates the adoption of cultural sensitivity and awareness. This added dimension of culture may require different methods of recruitment than those previously used like to determine whether it is better to expatriate a current employee or hire staff in the country the firm is moving into. (Lenartowicz & Johnson, 2007).



India's retail industry is the world's fifth largest, and it is one of the country's fastest-growing industries, accounting for 14-15 percent of GDP. There are both structured and unorganised sectors in this category. The Indian retail industry has become one of the country's fastest-growing industries in recent years. Many causes contributed to its expansion, including the rise of nuclear families, the expanding tendency of dual-

income households, an increase in disposable income and customer demand, an increase in luxury item consumption, and an increase in the number of people working. The following are some of the most important sections in the retail industry: Apparel and apparel, Fashion & Lifestyle, Retail Food & Beverage, Pharmaceutical Retail, E-commerce or E-tailing. Majorly retail industry has few types as shown in figure 1.

**Fig. 1 Types of Retail Industry**



Image source : <https://harver.com/blog/retail-recruitment-strategy/>

This industry employs a wide range of individuals with varying levels of experience. Jobs in operations and supply chain management are available. Though operations and supply chain management roles are the industry's backbone, there are a variety of different job opportunities, ranging from sales executives and store managers to merchandise planners and purchasers. In this era of constant battle between online and brick-mortar

stores there is also an evident fight between managing employees older way Vs adopting new platforms to do that. But ever changing market demands asks for a system in place to keep-up with the future workplace requirement.

## **2. Literature Review :**

The specialist field of recruiting, as well as further screening and selecting procedures, has evolved as

the general HRM has expanded to include more extents and themes. For example, from the 1950s to the 1980s, newspaper advertisements reached approximately 75% of candidates. Several web-based recruiting sites, such as careerbuilder.com and hotjobs.com, were developed before the end of the 1900s.; which opened the way for candidates searching online, there was an increase from 6% in 2002 to 96% in 2006 (Hebberd, 2017). In a study conducted by Dr.Michael Mboya Muma et. all it was found that there exists a positive relationship between human resourcing strategies and retention of employees in universities in Kenya. An impactful recruitment strategy assisted the universities in Kenya to attract, recruit and retain employees with the right skills, knowledge and abilities to give high job performance. Developed countries and developing countries

face difficulties to recruit and retain their key employees. So retention is a key mandate to achieve their competitive edge. [Dr.Michael Mboya Muma, Dr. Joyce Nzulwa, et. all, 2019]. Organizations must consider the overall impact of using social media in their recruiting system on the company and its hiring strategy. As global competition heats up, an organization's entire efficiency is now defined by its ability to attract the best and brightest employees. (Thomas & Ray, 2000). Today the organizations started matching their strategies with recruitment policies, in fact recruitment is done on the basis of overall company strategies. And all the relevant recruitment strategies in the organization is aligned with the overall corporate strategies as shown in Exhibit 1

### **Exhibit 1 : Corporate strategies vis-à-vis recruitment strategies**

<b>Corporate strategies</b>	<b>Relevant Recruitment strategies</b>
Sustainable growth Expansion Diversification Entry of foreign Markets Mergers & Acquisitions Fast growth and change Low cost leadership Differentiation Super customer service	Centralized recruitment Decentralized recruitment Candidates with multi-skills Candidates with multi-cultural backgrounds Candidates with multi-skills and multi-cultural backgrounds Outsourcing Highly skilled and smart candidates Candidates with intrapreneurial skills Candidates with positive attitude and emotional feelings

*(Source: Adopted from Rao,P. Subba,2009 Human Resource Management : Text and Cases)*

Recruitment may become an expensive process, if it gets prolonged for a long period of time. That is why many of the organizations measure the

recruitment costs to control the internal budget. Similarly time taken to hire an employee is also recorded, since it indicates how soon recruitment

can respond to the business needs. In the process these organizations miss the greatest indicator of a successful recruitment i.e the quality of hire.

Traditional methods of recruitment face many restrictions like career level, geographical boundaries and other issues related with physical harnessing (Dhamija, 2012). The online recruitment method would have updated databases with many career levels, industries and regions. Also it has updated background information of the organization, job description and personnel specifications to prepare an advertisement to help the potential employee know that for which position are they applying and the details of the organization they are intending to work with (Midiwo, Mukulu, & Waititu 2015). Basic human capital acquisition entails employers successfully completing the process of recruiting and selecting prospective employees. Companies hunt for prospective employees who suit the organization's needs through complex recruitment and selection processes. (Ahmad & Schroeder, 2002).

All recruitment companies seek to supply employers with the most qualified personnel possible, relieving employers of the burden of identifying and interviewing job candidates. It is also said that such firms are simply interested in assisting corporations in filling openings, and that they may sometimes provide organisations with inappropriate staff in order to earn money. In the future, this may even damage agencies' reputation (Marysol & Randy, 2019) It is desirable that organization should hire employees with vast,

relevant and appropriate levels of knowledge, skills and capabilities. Learning and development fundamentally aids an organization in the process of collective advancement through concerted expert and ethical replication and expedition of learning and knowledge that support business goals and develops an employees' potential, and respect and build on diversity (Mathis & Jackson, 2003).

In a study conducted by Joseph and Hazel to know the influence of recruitment, selection and talent development on the performance of civil servants in Kenya it was concluded that recruitment and Selection process that defines means of attracting and retaining employees, providing the same chances to all, irrespective of age, sex, race, creed, disability or marital status has a positive impact on performance of the civil servants. Further it found that if recruitment and selection is based on professional and academic qualifications, recruiting highly skilled individuals then these employees can help the department attain its objectives. Using acceptable job selection methods at the department and presence of effective placement procedure in the organization positively affect the performance.

### **3. Objectives Of The Study:**

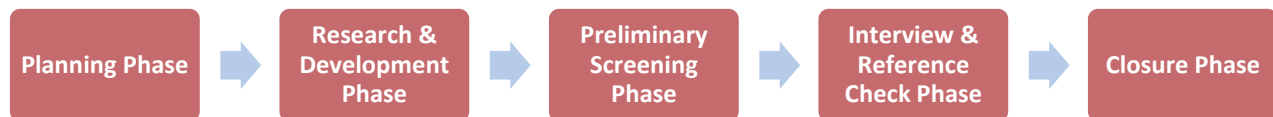
- 1) To explore the reasons behind adopting newer methods of recruitment and selection in various industries.
- 2) To critically analyze the most preferred recruitment & selection practice in retail

industry and discuss its relevance in the current scenario.

- 3) To recommend and suggest some of the feasible recruitment & selection methods to be embraced by the retail industry.

#### 4. Recruitment Phases In Retail:

Recruitment team of any firm needs an inside out approach based on strong insights, full-proof research and implementation of expertise to tap the best talent for the firm. Perhaps they understand the importance of having a resourced manpower to accelerate growth of business and profits. Entire recruitment process entices certain phases to result in having most appropriate candidate on the board as an employee. These phases are as below :



- *Planning Phase* : This is the initiation phase where the HR team understands the position requirements and the appropriate utility of such a requirement so as to strengthen the search for potential candidates. This is followed by the further toiling to plan a strategy that may serve the needs. This planning is based on all potential difficulties as well as the mechanisms to address them. It's imperative to search for the ongoing trends in the market, competency levels present in market and also the parameters that need to be considered for the position. With the said blueprint next step is resumed i.e. R&D.
- *Research & Development Phase* : This step necessitates a great deal of precision and inquisitiveness in order to find the

appropriate competency levels based on skill, experience, stability, and performance. Using all search tools and techniques quality candidates are sought after, and to arrive on best pool of candidates, they are ranked on these parameters.

- *Preliminary Screening Phase*: Once the parameters are set and the candidates are chosen, the HR team conducts preliminary screening, in which candidates are evaluated based on Key Result Areas (KRAs), Compensation Package, Job Title, Job Location, and other factors. The screening process is meticulously carried out in order to determine the candidate's competency.

- *Interview & Reference Check Phase :*  
Once the preliminary screening and interview is over, candidature is validated through discreet reference check. After that, the candidate is sent to functional heads who can analyse the candidate's capability and potential directly. If functional heads provide good input, a formal reference check is conducted on the candidate's work ethics, performance, demeanour, and other basic facts to ensure a perfect person-organization match.
- *Closure Phase :* The final stage of the procedure is bargaining and handholding. The pay package, joining date, and offer letter are all negotiated between the retailer and the candidate. Following that, the HR team must ensure proper placement and easy integration of the candidate into the company.

## **5. New Trends For Recruitment In Retail :**

When applicants are flooding into the highly competitive job market, it's very challenging than ever before to select the best among the pool, right tools & techniques can come to the rescue.

### **5.1) Customized Job advertisement**

A great advertisement can work wonders at the recruitment front and get unbelievable results for the firm. Retailers are highlighting the underlying

message through advertisement that it is rewarding to work with one's firm. The value proposition included at the time of seeking new candidates are such as opportunities for personal growth, professional advancement, special focus on teamwork, employee recognition, forward thinking management and many more to add.

### **5.2) Video-interviewing**

For retail jobs candidates generally apply from far flung areas, which become a costly affair to conduct the recruitment process. Video interviews are yet another way to assess the potential candidates on the qualification, other relevant skills and much more during the hiring process. Most of the time it is implemented as a preliminary interview, meaning thereby that, final selection of the candidate is not done until later in the process. Two types of video interviewing is used- one-way and live video interviews. One-way video-interviewing is asynchronous interview in which job candidates can record their responses to the interview questions anytime as per their convenience. They are also known as pre-recorded or on-demand video interviews since it doesn't require the interviewer to be present. A live video is a real time interview where the interviewer conducts face-to-face interview

### **5.3) Alternative workforce**

There is a rapid growth in alternative workforce arrangement, in fact it's mainstreaming. Alternative workforce includes contract workers, freelancers, outsourced teams and also 'gig'

workers. Most firms are capitalizing on such workforce, generally for the jobs which are transactional in nature and not strategic. Retail HR is buckling-up in this area, to manage and sustain in the market. Since such kind of workforce often pursue their passion and critical skill, it's a win-win situation for organization as well as the employee to reap benefit. This would ensure a high level of job satisfaction.

#### **5.4) Passive job seekers**

Passive job seekers are people who are currently employed and are not actively looking for jobs. Sometimes even after thousands of searches made right candidate is not found. A strong employee referral program may boost up the search of passive job seekers for a retail firm. Employees could turn out to be the witnesses for an organization's great working environment, to motivate and refer the passive job seeker. Many businesses advertise on online radio stations since this is where their potential employees spend their time. It is used by retail organisations, particularly those with in-store Wi-Fi, to reach out to passive job candidates. Organizations employ a variety of methods to find passive job searchers, including television commercials, posters, and billboards.

#### **5.5) Employee referrals**

A proactive approach to source the talent is need of any candidate driven market. It goes without a second thought that referrals are the best source of quality candidates. Retail stores are often a tough workplace and employees have an in-depth

understanding of the same. They have a better insight into the day-to-day operations which is communicated to the referred candidates so as to fit in the organizational culture and working style. Similarly new candidates go easy on the unrealistic expectations from the organization, which would prove to be mutually beneficial. Other benefits include the reduced time to hire and high applicant conversion rate, that seem to haunt any retail HR all the time.

#### **5.6) Social Media**

Technology can streamline the recruitment process. The firm's social channels are a great way to share the employer brand and job postings, at a large scale. All kind of job seekers nowadays utilize the social media and go through the company's profile before applying to the job. Companies now have access to more information about job candidates than ever before. Retail employees, too, are utilising their profiles on all social media networks whenever available. Employers can use relevant social media information in the selection of top qualified individuals, especially for specialised roles, if they want to adopt smart practises.

#### **5.7) Employer review sites**

Candidates prefer to have as much information as possible about a potential company before starting a job search or preparing for an interview. Basically employer review sites offer information on employee benefits and company culture,

reviews from current and past employees, about salaries and potential interview questions. It provides employees the opportunity to rate their job and their company across a variety of measures, usually according to a scale and/or percentage. It allows employees to rate their job and their organisation on a range of factors, usually using a scale and/or percentage system. Retail job seekers use review sites to gather objective, unbiased information about a company's work environment. Also, learn about the company's leadership, career opportunities, work-life balance, and contributions to current employees. Retail firms need to be cautious since company review sites can make or break their employer brand.

### **5.8) Data driven practices**

Data-driven recruitment enables the technologies and techniques used to analyze a large talent pool and identify the candidates having the proper skills and the right mindset to realize the organizational goals. As on date it came as a relief for the recruitment of middle level and above employees in few retail organizations. If the aim is to have the best talent of labor market to be on board, companies must start looking towards the latest data-driven HR technologies. Though not very popular among retail firms but surely data driven recruitment practices is the future. The rapid growth of HR advancements is providing companies with more data to identify talent that can improve the workforce productivity.

### **Conclusion :**

Undoubtedly several sourcing strategies exist and firms are very proactive in identifying the apt job seekers. Organizations condition the talents of their workforce by recruiting new staff with fresh talents or else by developing, training and educating existing staff. Only the right people can drive the success of the firm so effective recruitment and selection can achieve it and also align new staff with the strategic direction of the organization. The study concludes that recruiters in the HR department know that they can not use the same tactics to seek candidates from different groups of prospective and potential employees. Surely while recruiting different types of staff members, it is important to judge that which tactics work and which don't. It is the need for HR to fine-tune their current recruitment strategies, adopt new ones, continue to use those which have been effective and eliminate the redundant methods.

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