A STUDY ON ABSENTEEISM IN COLLEGE STUDENTS OF MAHARASHTRA

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ABSTRACT

Policymakers, corporate leaders, and educators have been focusing on boosting student achievement over the past decade. Hundreds of crores of rupees have been invested in raising standards, strengthening curricula, and improving classroom teaching and learning. All of these reform attempts are important, but they aren't enough. We will never be able to ensure that future generations receive the education they require unless we engage children and their families directly. And this is especially true when it comes to college attendance. In India, absenteeism affects practically every type of student group. It's not just a problem for low-income students in cities; it's also a problem for students and families in the middle class who want to go to college but aren't spending enough time in college to ensure they'll be equipped and ready to succeed once they get there. Why do so many students miss so much of their college experience? As a researcher who engages and motivates students, I chose to ask that topic directly to teenagers. I conducted a poll of Indian undergrad and postgrad students who were skipping classes and asked them why they did so and what they thought the consequences would be. The findings shed light on the human aspect of the 7-crore figure, reminding us that the most essential thing teachers can do is notice when students are absent and ensure that pupils are aware of the implications of missed days on their future plans. Students must participate in the discussion. We must establish a relationship with them and encourage them to become active participants in their education. They are adamant about it. If we, as parents, instructors, and even celebrities, demonstrate that we genuinely care about them, their dreams, and their frustrations, they will be more motivated to attend college.

***Keywords**: Absence, undergrad and postgrad students, college, engage, motivate and policy.*

Introduction

7 crores of rupees. That's the number of students who miss 180 days or more of college each year, according to estimates [1]. Undergraduate (UG) and postgraduate (PG) colleges are the epicenter of the absenteeism epidemic. On any given day, one out of every three UG students in various states and districts is missing [2].

That's a remarkable amount, but even more astounding is the fact that few teachers seem to notice, and few children seem to suffer any consequences for skipping school [3]. However, even if a student misses only five days of college, his or her academic performance can suffer [4]. Students who miss more than 100 days of college are more than 20% less likely to graduate than their peers, and are 25% less likely to enroll in any sort of college. Individuals who do go to academic institutions stay not as much probable to be ready, are further expected to register in corrective programs, and are more probable to drop out earlier to graduating [5].

As our country's leaders continue to set lofty educational goals for our children, one thing is certain: we will never achieve these objectives unless we lower the number of students who drop out of college.

The face of absence in everyday life

What are the names of these young people? The students that were interviewed for this paper come from all walks of life in India today. They are open category, reserved category, specially abled, and equally gendered people who reside in rural, urban, and suburban locations. A third of the children have college-educated parents, and over 60% grew up in joint families. Two-thirds of pupils polled say their family's income is "average or above average." These students have the same expressions as any other young individual. They simply aren't noticed.

When and why do young people skip college?

By the end of the third year, skipping college has become a habit [6]. Nearly three-quarters of current sophomores, juniors, and seniors who skip began doing so in UG College or

their first year in PG College [7]. What's the source of all these college dropouts? There's not much that can keep them in college – 61% of college skippers find it boring and uninteresting, and the most persistent skippers exhibit a strong distaste for the academic environment. They see no link between what they learn and who many aspire to be, and they feel isolated from the college environment.

When they're not in college, what do they do? When it comes to skipping college, the most popular activity (65 percent) is "hanging out with pals." Another 27% say they spend time on the Internet, watching TV, or playing video games. Only approximately 6% of those polled skip because they are working or caring for a child or other family member.

Getting along without being detected

Parents don't seem to notice how much students miss them [8]. It didn't matter if they skipped frequently or infrequently. It didn't matter if you missed one lesson or a whole day, or if you missed it once a month or once a week. The majority of teenagers claimed that their parents did not notice their absence from college most of the time: When it comes to skipping school, 42% of adolescents say their parents "never" or "rarely" know. Despite the fact that 66% of these students reported their professors, principals, and others had discussed their skipping behaviours with them.

What makes you think I'm worried?

Students also stated that skipping college has few or no direct effects for them. This is especially true for pupils who just miss a few classes. Only a minority believe their college work is affected, and the majority believes they would have to skip college a few times a week before their grades suffered or their chances of attending Sr. college were jeopardized. Nearly two-thirds (64 percent) of skippers intend to attend PG college after completing UG college, despite the fact that the same number (67 percent) are concerned that they would not be prepared for PG college if they continue to skip classes.

Understanding the consequences of skipping classes

The gap between the true effects of missing college (worse achievement, lower rates of UG and PG College) and both parents' (ignorant) and kids' optimistic outlooks on the future is striking [9]. Students requested that this disparity be bridged, and many even provided solutions to the problem.

1. Emphasize the importance of attendance: Students said they would be less likely to miss class if they were aware of the implications of their absences. As a technique of raising attendance rates, school officials refer to the success of making attendance a visible priority for both children and their parents in both big and minor ways.
2. Encourage students to participate: Students desire to be actively involved in their studies. Students seek for a link between what they study in college and their "actual life." Too often, their life outside of college, their aspirations and expectations for the future, and how they spend each day are completely disconnected.
3. Deliver the correct message to the right people: Often, it's the school principal or administrator that reminds pupils of the importance of going to college every day. Parents, a trusted teacher, and a well-known artist, athlete, or celebrity can all have a far greater influence on a student's decision-making than an authority figure who is not involved in the student's life.

Review of Literature

The Best Predictor of Student Success is Attendance.

According to studies, there is a clear link between student attendance and academic achievement and, eventually, graduation rates [10]. In fact, student attendance has been identified as the top predictor of UG

graduation rates in numerous researches [11]. Simply said, if you do not attend college, you will not be able to graduate. Students who miss 50 days of college per year (or just two days per month) have a one in five probability of graduating [12]. According to a study conducted by the NAAC in 2021, student test scores begin to decline after just twenty-five days away from college [17]. According to another studies, attendance is eight times more indicative of failure than a previous test result [13].

CBSE published "The Importance of Being in School" in the first part of 2021. Few states assess and report chronic absenteeism, which researchers define as missing at least 10% of school days each year, or roughly 18 days, according to the report. According to the report, 10% to 15% of students in the India are chronically absent, implying that 5 million to 7.5 million students are at risk of dropping out or failing to graduate [18]. To put that in perspective, the number of chronically missing pupils in India is almost equal to the number of K-12 students in Maharashtra [15].

Research Method

From June 14 to June 29, 2021, the researcher performed 516 online interviews in 25 cities or small towns across Maharashtra, India. Students in UG and PG colleges who report skipping college a few times a month or more are included in the survey. The survey was available in both Marathi and English for students to complete. The margin of error for all respondents is 4.3 percentage points, although it is larger for subgroups. The students who were interviewed attended either public or private universities. Although reserved category (24 percent), minority community (16 percent), and physically challenged (2 percent) children were substantially represented in the sample, they were predominantly open category (55 percent).

The goal of the researcher is to engage and inspire students to take charge of their education and future. He understands that going to college "all day, every day" is the most important thing students can do. The need of engaging students across the college to focus on attendance is recognised by the researcher. By incorporating pop culture into everything he does, the researcher hopes to encourage pupils to feel connected to their community and to motivate them. Researchers conducted a study of self-identified "college skippers" from the renowned UG and PG College in Maharashtra to better understand why so many students are so quick to skip school. At least once a week, these pupils said they skipped college.

• Who knows they aren't in college, according to the researcher?

• What are the repercussions, in their opinion, of missing so much college?

• What might motivate them to attend college more frequently?

• Who could possibly motivate them to attend college more?

• What is it that they miss about college?

• What do they do while they're not in school?

Findings and Interpretation

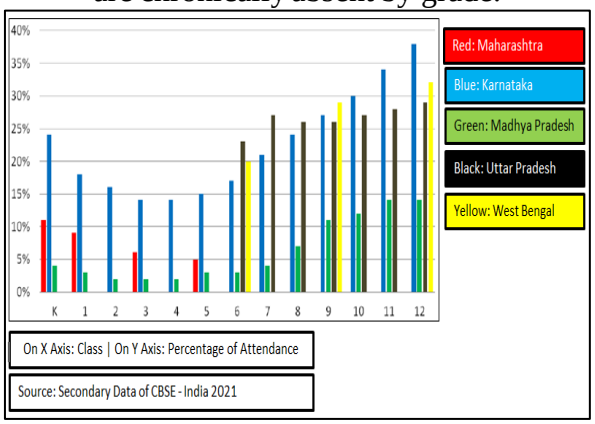
It all begins in middle school (Based on Secondary Data)

Chronic absence does not affect all students equally. While chronic absenteeism does not differ much by student, gender, or caste, grade level does. In primary schools, Indian kids have unusually high absenteeism rates, although attendance levels out until senior school.

Many parents, according to the researcher, encourage their children's attendance in school once they reach fifth grade. When children reach middle school, everything changes.

The number of chronically absent children rises each year of school beginning in sixth grade, with 11th and 12th graders having the highest absence rates.

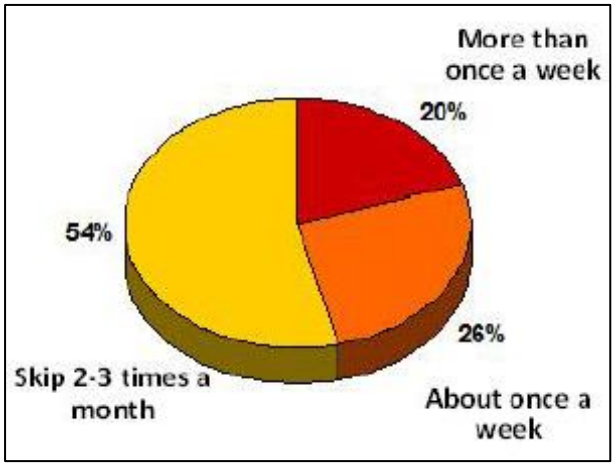
Chart 1 shows the percentage of pupils who are chronically absent by grade.



Student Skippers: A Profile (Based on Primary Data)

According to the interviews, skipping college is a well-established habit by the conclusion of high school. Nearly three-quarters of current sophomores, juniors, and seniors who skip began doing so in UG College or their first year in PG college. They also skip a lot: nearly half of skippers (46 percent) are gone once a week or more.

Chart 2: How frequently do you miss classes or college?



Source: Primary Data

The following are characteristics of the college skippers' households:

1. 57 percent were reared in a nuclear family, while 33 percent were raised in a joint family.
2. In the past year, 39 percent of people have relocated; 19 percent have moved at least twice.
3. 34% have at least one parent who has completed college.
4. 33% have a parent who dropped out of PG College; 14% have neither parent graduate from high school, and 19% have only one parent graduate from PG College.
5. 23% of respondents say their household has a lower-than-average income; 24% say their household has a higher-than-average income; and 44% say their household has an average income.

There are two types of skippers.

Students' future objectives, reasons for skipping college, and what they do when they are not in college are similar across age and gender. However, the data reveals two distinct categories of college skippers: habitual skippers and occasional class cutters. Skippers miss at least three days of college every week on a regular basis. These students are more likely to come from a nuclear household and are more likely to have gotten into legal problems. This group of pupils is more likely to live in cities. Only approximately a third of Habitual Skippers intend to continue their education after high school. Another third intends to work or enter the government service immediately after graduating from UG College. These pupils recognise that they are on the verge of leaving UG College.

A few times a month, Class Cutters take a break. These students are more likely to live in joint family households and to have at least one parent with a college diploma. Occasional Class Cutters are more likely to live in the suburbs or in a small town. More than half of these students are confident that they will attend a four-Year University and those they will receive mostly A's and B's in college. Only roughly a quarter of these students say their parents are "always aware" of their lateness. Aside from receiving a detention or

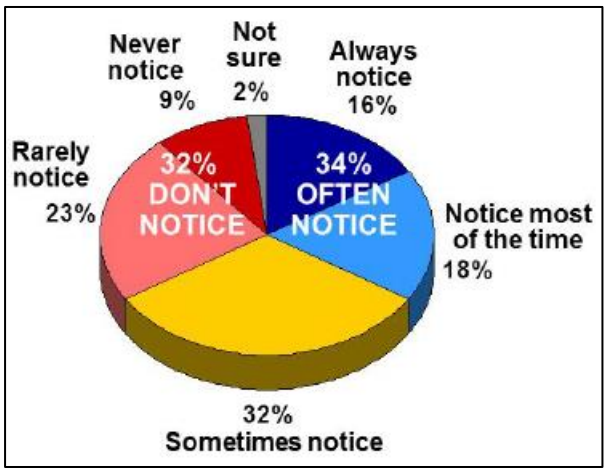
failing an exam, these kids have suffered few consequences for missing college.

Both groups of skippers are on the verge of extinction. Skippers who skip classes frequently are the most likely to drop out of UG college, a decision that more than a fifth of Indian UG students will make. They are gradually disengaging from college and, as a result, falling behind academically. Occasional Class Cutters are more likely to graduate, but many are unaware that skipping college has a direct impact on their professional readiness. When students enroll in PG Colleges, they will be faced with a series of remedial programs, and many will become disillusioned and quit out before earning a PG degree.

No one notices you when you're young.

Students who Skip College and/or a class feel that their absence will be noticed by few people at college or at home. While institutions are likely to keep track of all absences, students think there is only a 50-50 probability (or less) that officials will notice. Their parents, they feel, are even less likely to notice. Every week, these children make decisions that will have long-term ramifications for their future, and they assume no one knows.

Chart 3: How often do adults at your college, such as instructors, administrators, and attendance officers, notice when you skip college or class?



Source: Primary Data

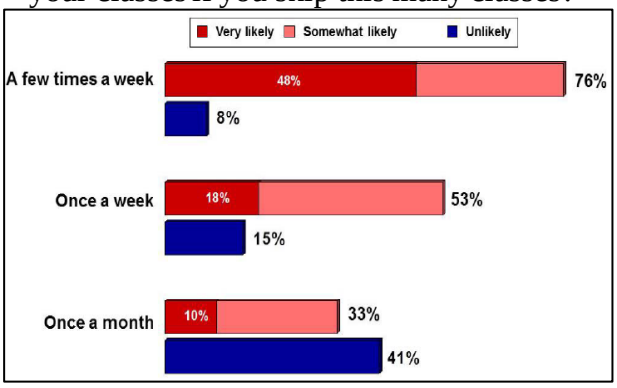
Chart 4: How often do your parents or guardians know when you miss college or a class?

Source: Primary Data

There are no real consequences.

While the majority of kids who skip classes incur minor consequences such as detention, failing a test, or being grounded, few students regard college as having real-life consequences. Students who skip college 2-3 times a week feel that their academic success will not suffer as a result. They incorrectly feel that skipping one or more classes per week will jeopardize their marks and ability to graduate. Few teenagers regard missing college 2-3 times each week as a serious problem. Despite this, the majority of kids who do not attend college intend to attend PG College: 46 percent said they intend to attend a two-year PG institution, whereas 18 percent said they intend to attend a two-year PG college.

Chart 5: How likely are you to fall behind in your classes if you skip this many classes?



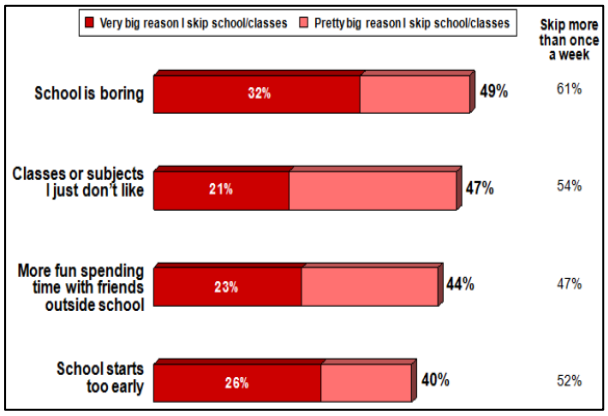
Source: Primary Data

"College is a chore."

We asked students to explain why they miss all or part of a college day in their own words. The most prevalent justification for skipping college is that it is "boring." Nearly half of those who skip say it's because they're bored in college or uninterested in their studies and three-quarters say these factors influenced their decision in some manner. For many teenagers, college begins far too soon. Early start hours were cited by two-fifths of young people (40 percent) as a major factor for missing college or class.

In the end, many students would rather spend time with their buddies than attend college. A big reason for skipping college, according to over 45 percent of all students, is that it is "more fun spending time with friends" than attending to college. Avoiding a test/homework (23 percent), having other work/family duties (18 percent), bullying (11 percent), and transportation concerns are among the other reasons students cited as very significant or somewhat big reasons for missing college (9 percent).

Chart 6: What are the reasons you don't go to college?

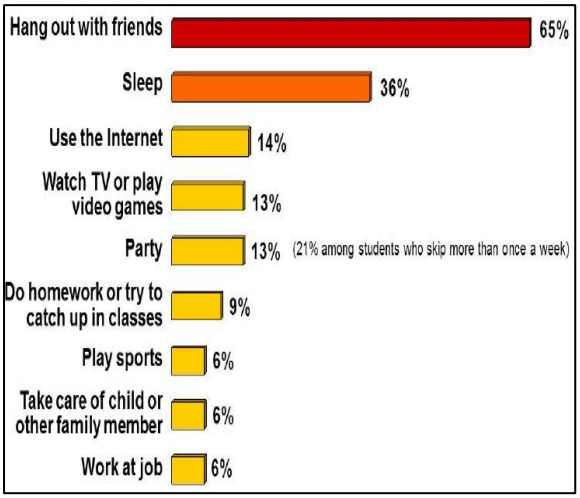


Source: Primary Data

"Hanging Out" is a casual decision.

When students miss class, they frequently return for a portion of the day. Only approximately 28% of pupils said they skipped an entire day of school. Many people say they've dropped one or two classes. What do they do and where do they go when they skip class? Nearly two-thirds of students said they spend the majority of their time with their pals. When they are not at college, other students say they spend their time sleeping, watching television, and/or surfing the Internet at home.

Chart 7: When you miss college or classes, what are the top one or two things you do?

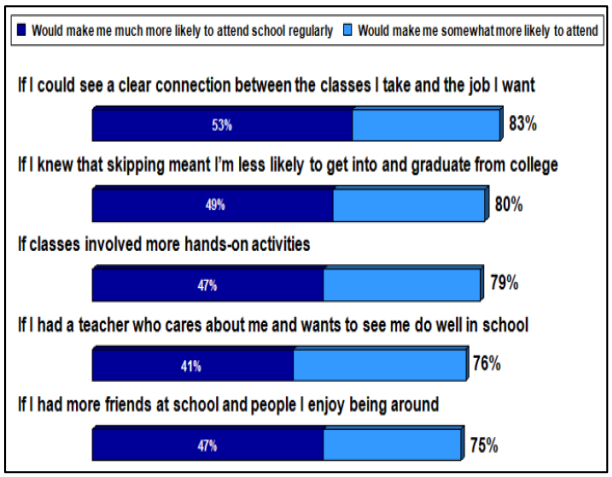


Source: Primary Data

It's All About the Messenger

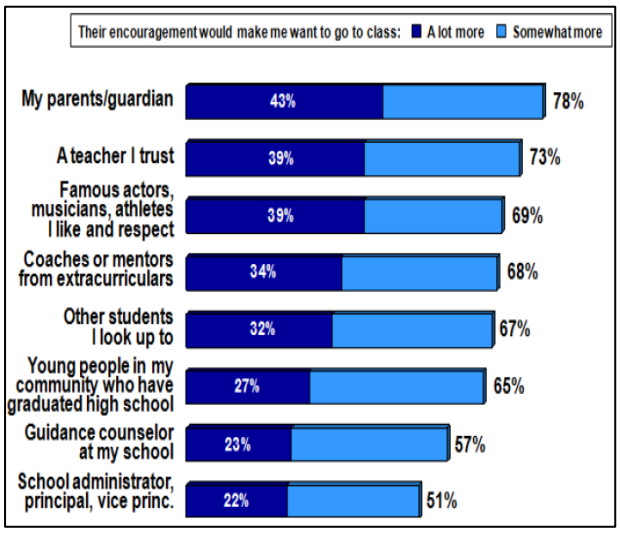
When we asked students what would motivate them to attend college more frequently, they said they wanted to be more involved in their studies. Students believe that if their classes were more relevant to their life and goals, they would attend college more frequently. Students also believe that chronic absenteeism may be reduced if we simply communicate the negative consequences of skipping college in a way that they understand. While students claim that college authorities have advised them to attend classes more frequently, the message appears to be ineffective. As a result, the messenger is important. Students want to be encouraged to attend school by someone with whom they have a personal relationship, whether it's a parent, a trusted teacher or coach, or a celebrity they like.

Chart 8: What would motivate you to go to college on a more regular basis?



Source: Primary Data

Chart 9: Who would motivate you to stay in college and attend more classes?



Source: Primary Data

Recommendations and Suggestions

This section provides a framework for collaborating to achieve the long-term objective of ensuring that all students in the India are enrolled in college and prepared to learn. In the medium term, the researcher proposes a framework for action that will provide colleges and their stakeholder groups with the tools and resources they need to map and manage chronic absence. This framework is broken into four parts, each of which should be bolstered by what happens at universities as well as collaborations with other community players.

1. Actionable Data: Invest in Early Warning Systems Development

2. Changing the Narrative through Positive Messaging

3. Developing and Implementing Early Interventions: Capacity Building

4. Establishing Performance Standards through Shared Accountability

While all of these elements must eventually be in place to maintain progress over time, actionable data is listed first since it is the most important starting point for action. It's what enables schools and institutions to figure out where they should focus their positive messaging and capacity-building activities. To make the concept of shared accountability work, actionable data must be available.

1. Actionable Data: Invest in Early Warning Systems Development

Supporting the collection of actionable data that can be used to develop early warning systems that identify at-risk kids and schools, as well as a better overall understanding of chronic absence patterns in order to determine when and where poor attendance is an issue.

Actions that could be taken

1. Invest in the development of more effective student data systems that incorporate attendance and can quickly create information about which and how many children are chronically missing by grade, division, mentor allotment, and student sub-population while maintaining confidentiality.
2. Assist employees, faculty, and mentors in their learning and development of data reports that are simple to use and understand.
3. Provide information and resources to encourage data exchange while maintaining privacy.

2. Changing the Narrative Rationale: Positive Messaging

The mainstream narrative on student absence blames parents and punishes pupils. Neither of these approaches is useful in assisting families and students in attending college and being prepared to learn. As a result, the narrative surrounding student attendance should be modified to one that engages and empowers families, students, and communities. Making the case for action to address chronic absenteeism and engaging diverse sectors around this issue requires a shift in the narrative.

Actions that could be taken:

1. Develop new messages that raise awareness about chronic absenteeism without blaming students or families; promote a commitment to unpacking the underlying reasons for students missing college; assist families in understanding the negative consequences of multiple absences; and ensure that communications are culturally and linguistically meaningful and relevant.
2. Form an institutional coalition of important stakeholders to communicate the new messages through their institutional channels, including school superintendents, management decision makers, principals, teachers, health experts, parent leaders, and others.
3. Identify and mobilize significant public figures to support the new public narrative.

3. Developing and Implementing Early Interventions: Capacity Building

Rationale: Colleges and stakeholder groups must have access to model practises, technical help, financial sustainability choices, and additional resources in order to feel confident that they have the knowledge and support they need to map early chronic absence and implement effective interventions. The linked university, as well as the alumina association and others, can help ensure that these resources are available. To guarantee that a coherent plan addressing chronic absenteeism incorporates many sectors in a community, a collective impact model should be implemented.

Actions that could be taken:

1. Provide key professors and staff members at the university and linked colleges with a comprehensive set of tools and a diverse range of behavioural and counseling training opportunities.
2. Develop model solutions for unpacking and dealing with chronic early absence that can be used to lead efforts throughout the state.
3. Present case studies of successful initiatives and explain the tactics and best practises that can be gained from them.
4. Encourage linked colleges to participate in peer learning events to exchange ways for collaborating with health providers and other local stakeholders.

4. Establishing Performance Standards through Shared Accountability

The need for systems that promote and give incentives for college departments and class divisions to boost student attendance is critical. Chronic absence, for example, might be incorporated into department and class division accountability systems, such as report cards, to track progress and indicate areas where further support is needed to improve student performance.

Actions that could be taken:

1. Encourage the institution to develop a standardised definition of chronic absence, including what constitutes a day of absence, so that statistics can be compared across departments and class divisions.
2. Encourage the use of data on chronic absenteeism in college turnaround efforts.
3. Advocate for chronic absenteeism metrics to be included in college report cards and other accountability mechanisms.
4. Provide linked universities with examples for collaborating with colleges to

incorporate chronic absenteeism into their college improvement programs.

Conclusion

As another college year begins, we have the opportunity to make tremendous progress in decreasing achievement gaps by reducing early attendance gaps. We can ensure that children, particularly our most vulnerable youth, do not miss so much college that they fall behind before even having a chance to learn and experience the rewards of doing well in the classroom by investing early. Colleges alone will not be able to accomplish this. A wide range of community stakeholders, particularly health care providers, can have a significant impact. It takes a determined effort at the college level, with the correct policies and professional development in place, to map and solve the early attendance gap. It necessitates creative thinking at the college level, as well as data for sites and family support. If done correctly, these local examples can educate the institution's approach and create a circle of innovation and growth that ensures that every young person has an equal chance to succeed in college. Incorporate chronic absenteeism with assessments of community health needs.

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INDUSTRY 4.0: EMERGING CONCEPT: OPPORTUNITIES AND RISK FOR INDIA

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ABSTRACT

Industry 4.0 terms is referred to fourth Industrial Revolution. The revolution according to this era was characterized by use of digitization, Computational power, IoT, Business Analytics, Artificial Intelligence, advanced robotics and specially use of all these technologies in manufacturing process. If we consider Indian economic structure, it is seen that India depends heavily on its service sectors for growth. Manufacturing sector is a cutting edge today and hence heavily needs high level of skills to boost growth. By considering this some countries already stated adopting Industry 4.0 techniques to improve the manufacturing techniques. By considering all issues related to global warming and its impact on environment itis recommended to follow the technology in manufacturing which will lead to minimizes the waste, maximizing the production capacity, full utilization of recourses, product modifications as per green code, and even modifications in supply chain activities is the basic concept behind technology used in manufacturing according to the concept of Industry 4.0.With the help of this research paper we will try to focus on the concept of Industry 4.0 , what will be the possible model to follow Industry 4.0 and opportunity and Risk for India to adopt Industry 4.0 concept.

Keywords: *Industrial Revolution, Business Analytics, Artificial Intelligence, robotics, Service sectors.*

Introduction:

The term "Industry 4.0" mean implementation of smart industry in which smart devices are used to established network in the activities related to raw materials, processed materials, final products, machines, new tools, robots and human resource. This smart industry is characterized by flexible production process, optimum use of resources and integration of customers and business partners in all business process.

Common picture that can be observed in smart factory is that men, and machines or robots will act as equal partners. According to the concept of I 4.0 is there will be combination of new technologies like big data, processing speed, Internet of Things (IoT), Business analytics, AI, robotics, and man machine systems and so on. I 4.0 would mean the use of all recent and updated technologies in production process. This will result in the "Smart Factory", which is characterized by advanced process, resource efficiency, and ergonomic design.

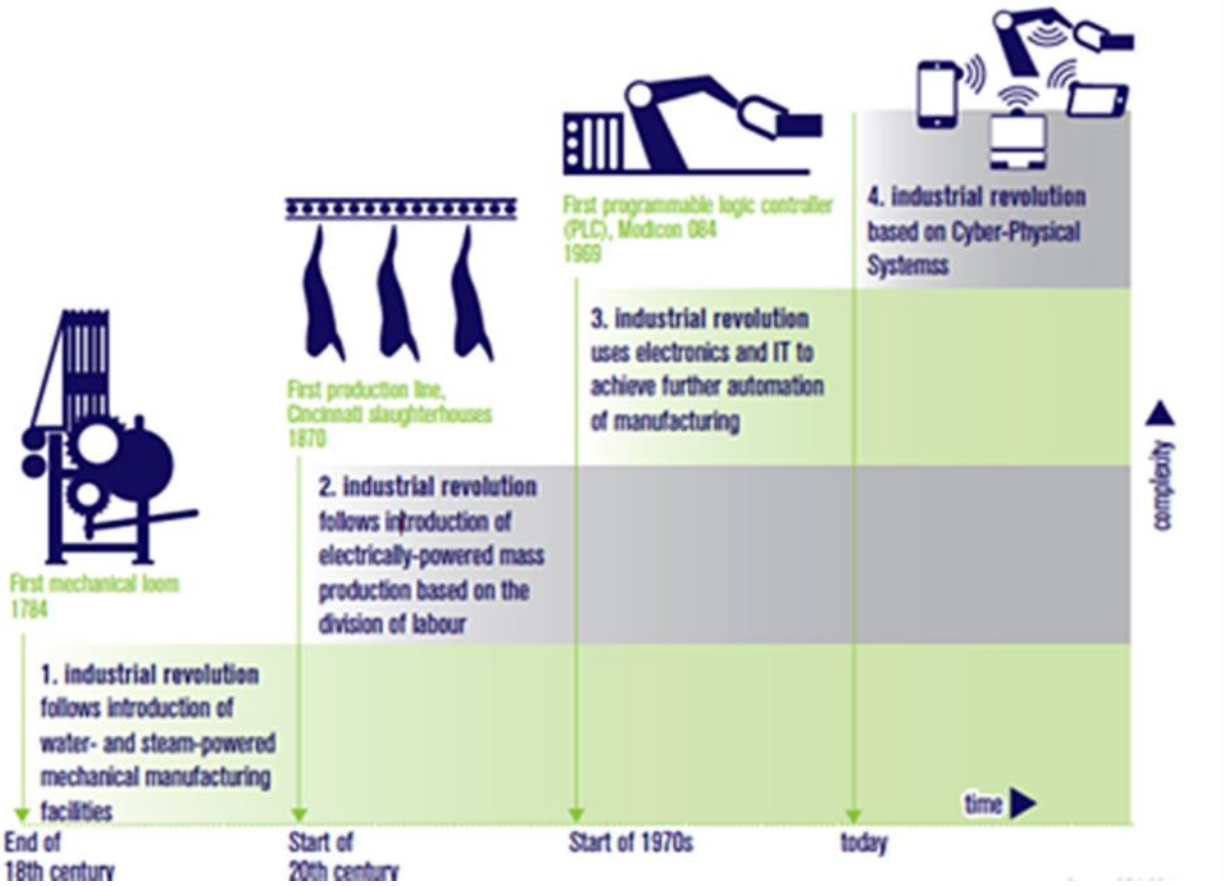
Digital technology is responsible to brings major changes in the business models. Production system must be more flexible to adopt a lot of technology innovations into reality as quickly as possible. This can be achieved with the help of two main factors that are hardware and software system. Innovation and advanced technology can be applied to the smart production in a way to influence the entire product life cycle right from product design till the product recycling.

The objectives of all these activities is to increase productivity in minimizing time period between the development of a new product and its delivery to customers in the market for 50%, efficiency and energy savings to ensure competitiveness in the world market.

Objectives of Study:

1. To understand the concept of Industry 4.0.
2. To analyses the structure of Business organizations according to Industry 4.0.
3. To study opportunities and threats in implementation of Industry 4.0.
4. To analyze position of India to follow the industry 4.0 concepts.

Following image try to elaborate the First Three Industrial Development in India.



Initially India was participated in various economic activities which contributed to the growth of the economy. During this era textile industry established in India and it was the major contributor to the national income. Before industrial revolution, India had a very well-established cotton industry and its products were exported to various parts of the world including Europe and America. The textile industry in India achieved this by access to low waged labor and skill that resulted in high quality but low-priced products during late 17th century

Second industrial revolution was characterized by use of electric power for increasing or large production.
In this era jute textile mills were established in Bengal and textile mills in Bombay and Ahmadabad. During 1911, J.R.D. Tata established the first steel mill in Jamshedpur.
Up to two world wars industrial development in India is very slow and poor.
Industrial Revolution industry development plan mainly focus on development of heavy industries, R&D teams in organizations, higher education universities, and improvement in agriculture activities.

1980 is the beginning of third Industrial Revolution. This revolution introduces new economic thinking in India. Economic freedom started during this phase of Industrial development. Many organizations enter into technical collaboration with foreign firms. Local and domestic organizations undertook various initiatives like implementation of research and Development activities, updating in productivity, and innovative management techniques for better allocation and utilization of resources.

What is Industry 4.0?
The term "Industry 4.0" indicates the smart factory having digital devices that are networked and these devices communicate with raw materials, semi-finished products, products, machines, tools, robots, and humans which all are involved in different activities of the organizations. Smart industry is characterized by flexible production system,

optimum use of resources and integration of customers and business partners in the business process.

In such type of advanced type of factory, machines and men will be equal working partners; Artificial intelligence is implemented in the terms of robots and other devices as compared to the previous generation of robots. Like this the use of digital technology in production industries brings prominent changes in the business models. In order to implement this changed model in organization digital innovation is required to adopt by the organizations. Smart industry mainly focuses on flexible production process with the help of hardware and software system for the real-time evaluation of data.

The objectives of development of this smart industry include:

1. To increase productivity.
2. To increase the efficiency of production.
3. To save energy.
4. To identify competitiveness of India in the global market.

Readiness of India towards Industry 4.0

World Economic Forum (WEF)has performed holistic research indicating readiness for adoption to this new network model by various countries.

Key indicators for identifying how countries are performing in the digital world is a Network readiness index. And this readiness index is based on some of the following criteria:

-Increasing pressure to implement innovative and new technology in productions system.

-Competition with rapidly growing digital business and companies.

-Legal and political approaches to adopt digital technologies and

According to above mentioned network readiness index criteria, India ranks 91 out of 139

Countries.

As per German Engineering Federation (VDMA) there are six-dimensional model to assess

The readiness of enterprises, these includes following six dimensions:

1. Strategy and organization
2. Smart factory
3. Smart operations
4. Smart products
5. Data services
6. Employees

Current Status of Industry 4.0 in India:

India ranks sixth as a largest manufacturing country and so India focus on the manufacturing sector forms an Integral part of the country's long-term vision. Government is initiating various activities like 'Make in India' campaign. And also, Government is encouraging various entrepreneurship development activities to promote the manufacturing sectors in India. The expected share of manufacturing that government wants to rise from 17 to 25 per cent. Government of India have taken the number of initiatives and policy reforms like

Introduction of the GST (Goods and Services Tax)

FDI policies are made easy.

A major part of the Indian manufacturing sector is still in the post-electrification phase as it uses technology limited to systems that function independently of each other. According to requirement of Industry 4.0 concepts integration of physical systems on cyber platforms and this basic premise is still not sufficient in India. It has been observed that Individual, Small& Medium Enterprises in India cannot adopt full automation technology due to high cost involved in Automation. So if try to summaries the current position of India to accept or adopt Industry 4.0 concept, we find that:

1. Ignorance of the technology in India.
2. Lack of Systematic approach towards modernization in Indian organization.
3. It seems that even organizations are not willing to adopt the new technologies.
4. India has availability of low waged labor and due to this organizations are not ready to adopt automation
5. Each industry does not produce large volume of

products so not ready to adopt the automation.
6. Skill sets required to adopt the automation in industries is absent in India.
7. Government plays a vital role in taking decisions regarding automation and industrial Development.

Government Initiatives:

Indian government, its policies and strategies play an important role in Development of manufacturing industries and adoption of Industry 4.0 concepts.

We can summarize the initiatives of Indian Government as follows:

2015 ---Launched an IoT Policy.

2015 - National Policy for Advanced Manufacturing to enhance India's global manufacturing competitiveness.

Mission on Cyber Physical Systems (CPS) and allotted an initial corpus of INR100 crore for commencement of the mission.

2017 -- National Manufacturing Policy, 2017: which focus on adoption of digital platforms for I4.0

Centre of Excellence (CoE) on IT for Industry 4.0.

2018-19 -National Program on Artificial Intelligence.

2018-19 - Mission on Cyber-Physical Systems

Role of Organizations: The industry, particularly the large and multinational manufacturing companies, will adopt 4.0 if they see returns on investment.

It is essential to prepare the roadmap for adoption at various levels of technology appropriate for different scales of operations especially for MSMEs.

Opportunities and Risk involved in industry 4.0 concepts for India:

There are several risks associated with the adoption of Industry 4.0.

India still lagging in adequate physical and digital infrastructure. Indian government is taking continuous efforts of to enrich the industry sectors with required infrastructure such as roads and electricity.

India's telecommunication network still suffers from slow data speed and unstable connections.

As per the study report proposed by KPMG India Cybercrime Survey Report 2017, 79 % of corporations in India have acknowledged cyber security as one of the top five business risks.

Apart from cyber security, the regulatory environment pertaining to data privacy would also need to be strengthened.

High cost of digital technology is yet another factor. Building the factory of the future with an entirely connected system could require significant capital outlay.

Getting access to digital technologies remains a challenge due to the high cost of these technologies.

There is still a leadership gap. India lacks business leaders ready for Industry 4.0.

Although Indian companies have strong traditional leadership, there is a deficiency of digital experts with a strong vision for Industry 4.0 adoption.

India's present workforce lacks skill and expertise in new age technologies such as data analytics, additive manufacturing, and IoT.

The government, industry, and academia need to collaborate to enable an Industry 4.0 ready workforce.

The availability of adequate talent in both terms i.e. Strategic leadership level and factory floor can prove to be a significant challenge for Indian companies on their way to Industry 4.0 maturity.

The traditional organizational structure incorporating human-human hierarchy is needed to replace by functions where humans and machines would interact at

strategic and operational levels.

Mostimportantly, there is a need to change traditional mindsets and skillfully manage that change across organization.

With Industry 4.0 automating most of the technical tasks, thefocus could turn to soft skills for employees to be successful.

The current workforce would need to be re-engineered to fill new roles.

The next generation workers need to be digitally strong.

At present, India is struggling with low vocational training capacity. It is only 0.8 per cent of the total workforce as compared to 6.7 per cent in the US and 11.5 per cent in China.

The skilled workforce is only 4.7 % in India as compared to 24 % in China and

96 % in South Korea (PWC and FICCI, 2019).

Repetitive jobs may disappear. This is likely to leave a deep impression on employment landscape.

There may be new role for the labour force in the form of supervisory, managerial and cross-functional, demanding diverse skill sets.

Industry 4.0 is likely to create widespread disruption in the labour market.

The key stakeholders—the government, industry and training institutions—have to come together to re-engineer theeducation system to make employees competitive.

Conclusions

After the analysis of the industry 4.0 concepts, Requirements, initiatives and current position of India in adaptation phase of this Industry 4.0 concepts, following conclusion can be drawn:

1. Concept of Industry 4.0 is completely technology oriented and it requires tremendous changes in manufacturing technologies to adopt this 4.0 strategy. For large scale production these concepts are very important.
2. According to industry 4.0 concepts industry models will have drastic changes. Industry will be a Smart Industry with smart products, Smart process, Smart operations and prominent use of Information Technology in all sense of manufacturing.
3. As far as opportunities and threats are considered for India it can be concluded that threats are more due some prominent factors like non-awareness of the technology in India, availability of Cheap labor and due to this organizations are not ready to adopt automation , Each industry is not large scale where volume of products is very high so as to adopt the automation, India has non availability of skill set to adopt the Automation.

   But if Indian Government along with Industries and Higher education Institutes follows the adaptation policies for Industry 4.0 then India and Indians will have very high growth opportunities.
4. We can conclude that India is not completely ready for adaptation of Industry 4.0 model but for future growth and development we need to start adopting these concepts.

India should adopt digital technologies to become a global manufacturing powerhouse.

Since the launch of “Make in India,” some progress has been made. The global manufacturing process is transformed by digital technologies such as IoT and robotics. But adoption of digital technologies in Indian industry is still in its infancy. There are many advantages for India.It has a number of factors in its favor that are mainly huge and growing domestic market, a large number of workers with diverse skills, demographic dividend, English-speaking scientists and engineers, research and development institutions, and a large startup technology base.

Along with being a catalyst for growth, digital technologies may be disruptive with far reaching effects on productivity and employment.

Following are the implications for India:

1. India’s low labor cost advantage may lose.

2. With the right ecosystem, India could gain a significant share of embedded software services, data management, and supply chain restructuring.
3. Along with physical infrastructure, large-scale investments in requisite digital ecosystem are needed.

Advanced technologies such as 5G mobile network, wireless sensor network, 3D printing, industrial e-commerce, cloud computing, AI, and big data will determine industrialcompetitiveness.

Global industry is at the brink of the next technological revolution. The combination of intelligent machines, modern communication, big data, and cloud computing is causing disruptive changes in industrial production. "Smart Manufacturing," "Industry 4.0," and "Industrial Internet" are labels that will characterize the upcoming transformation. The new technology paradigm will reshape the dynamics and the rules of global competition. The race for advanced industrial production may decide the fate of large corporations, and also determine the overall development of the economies.

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E-PHARMACY- CURRENT OUTLOOK & FUTURE TREND

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ABSTRACT

Online buying journey in India started since 2007 with books, smart phones and groceries by FlipKart and subsequently Amazon in 2013 June.Year on year,online buying gained attention with the introduction of more E-Commerce stores which reinforced customer's trust. In 201,5 Indian internet Pharmacy Association (IIPA) was formed by 11 start-up E-Pharmacies. Because the Traditional Pharmacies are highly fragmented and they buy medicine in small quantities resulting in reduced margins, competition and price increase, hence sustaining capacity is at risk. Therefore, with the advent of technology, E- Pharmacy has taken birth to bridge this gap. E-Pharmacies are online platforms where consumers can purchase medicines without visiting conventional retail medical shop.Today,acceptance of online buying medicines has increased during COVID-19, and the current market size is expected to grow by 20% by 2024[1]
This review article examines to understand the consumer behavior towards on online buying and future of E- Pharmacy potential to grow.

***Key words**: E -Commerce, Online Pharmacy, Consumer Behavior.*

Current market scenario of E-pharmacy in India

Indian e-Pharmacies started around 2015, gained acceptance rapidly over years. Currently, approximately 50 E-Pharmacy players are in India -Pharmeasy, Medlife, 1mg and Netmeds are some of the leading players in market.2 Estimated market size of India E-pharmacy is $0.5B which is approximately 2-3 % of total Indian pharmacy sale. During Lock down, the Union Govt. and State governments identified E-pharmacies as essential services and went one step ahead to encourage customer through their ArogyaSetuportal and app to promote online buying of medicines. 3With increasing acceptance of E-pharmacy, it has potential to gain a market share of 5-15% and expected to grow at a compounded annual growth rate over 20% reaching to approximately US$3 Billion by 2024.3

Objective

- To study current consumer outlook towards online buying medicines
- To review Govt. policies & regulations for E-pharmacies
- To understand factors contributing future trends of E-Pharmacy

Research Methodology

The data collected is descriptive. Data used in this article is collected through secondary sources like published articles, journals, newspapers, reports and website. This data was verified for relevance, authenticity before its inclusion in this paper.

Discussion

1. Current benefits & limitations of E pharmacy

Benefits of E pharmacy4

- Price discount

E-pharmacy platforms offer price discounts up to 20-30%, hence online buying of medicine helps consumer to save money

- Comfort &Convenience

E-Pharmacy offers greater convenience & access of wide range of medicines. It takes less time to order medicine on E-pharmacy than buying from conventional retail store with doorstep delivery. Specially contact less medicine delivery has helped consumers during covid-19 scenario.

- Available for 24X7

Consumer can order at their ease; E-pharmacy portals are functional 24X 7.

- Medicine information

Majority E-pharmacies provide useful information on medicines & diseases which

can create consumer awareness for medicine usage

- Quality of medicine

E-Pharmacies ensure genuine drug supply, sourcing it directly from manufacturers and licensed resellers.

Limitations of E pharmacy[4]

- **Consumer reach**

Currently E Pharmacies are able to deliver medicines till tier III cities, so catering medicines to remote cities & rural areas is still a concern

- **Emergency medicines**

Delivery of emergency medicines is currently not possible with E Pharmacy

- **Lack of physical supervision**

E-pharmacies do not have any processes of medical supervision or physical evaluation in place.

- **Speed of delivery**

E-Pharmacies need to work hard on fastest delivery of medicines currently, Medlife has started express delivery of medicines in 2 hours after the order and Myra promises of medicine delivery within 1 hour of order.

- **Security and confidentiality of information**

Today, consumers have major concern about prescription privacy hence E pharmacies must ensure confidentiality of consumer data.

2. Consumer outlook towards online buying

E-pharmacies gaining acceptance day by day in India, factors influencing buying online have been evaluated well in earlier studies. The major key factors influence consumer behavior for buying medicine online are low price of medicines, wide range of medicines, convenience of buying, doorstep delivery & quality of medicines.

As per the study done by the FICCI, the overall consumer perception regarding online buying of medicine is positive. Almost 90% of the respondents showed inclination to buy online medicines. Convenience of ordering medicine &doorstep delivery of medicines are key contributing factors for attracting more & more consumers. [6]

As per FICCI white paper approximately, 76% respondents agreed that E-Pharmacy would be convenient as compared to the existing mode of purchase. [6]

India being a price-sensitive country, price of medicine is important factor for making medicine accessible.[5]Lower prices of medicine are perceived as one of the major influencing factors for buying online medicines. Around 84% of the respondents prefer low prices, discounts key feature for consumer buying medicine on e-Pharmacy[6]

Changing lifestyle of the masses is leading to a rise in chronic and lifestyle diseases amongst the Indian population. Among respondents, 94% have responded positively for buying chronic disease medicines on E-pharmacy. Currently-Pharmacies primarily cater to the medical requirements of chronic patients. [6]

Apart from offering attractive discounts by E -Pharmacies such as Doctor consultation, Health information like disease awareness and reminders to buy medicines regularly and Diagnostic facilities at consumer door step. Mr. Prashant Tandon who is co-founder and CEO of 1mg (E Pharmacy player) quoted, "People are apprehensive about exposure while venturing outside for medicines and lab results and prefer online options and the need at present is unbounded. The company is actively investing to cater to demand".[2]

3. Current Government policies for E-pharmacy-

The are no specific rules for E -Pharmacy in India. However, in 2015, IIPA – was formed and now changed to DHP – Digital Health Platform, and the president is Mr. Prasanth Tandon formed set of rules in which members like Tata 1mg, M-chemist, Netmeds, Pharm Easy, to name and other few online pharmacies are following. Government of India framed 'The drugs and Cosmetic Rules, 1945'. Prior to Independence, under the heading of 'The Drugs and Cosmetics Act 1940'. As the time changes with the birth of internet, the drugs are made available through online drug stores in advanced nations. However, in India it all started in 2015 with some individuals framing rules and formed

association to sell the drugs on line for consumer by uploading prescriptions. Government of India took initiative under Department of Health and Family Welfare under Ministry of Health. Drafted policy for online Pharmacies as "Draft – E Pharmacy Rules published on August 2018 and called for Objections and suggestions from the public on or before October 12, 2018 to make an act. Looking back in India,only the Drugs and Cosmetic Rules (the "Rules") were formulated in 1945 under the Drugs and Cosmetic Act, 1940 (the "Act") for regulating the import, manufacture, distribution, and sale of drugs and cosmetic in India. Given that the Act and the Rules were enacted prior to the advent of the internet. Government did not anticipate the revolution of the sale of drugs over the internet.as the e -Pharmacies are setup in India 2015, the Drugs Controller General – India the current act does not show the difference of selling drugs either on online or offline.However, in 2015, Indian Internet Pharmacies Association (IIPA).

4. Factors contributing future trends of E-Pharmacy-

E-pharmacy is getting acceptance day by day & future looks bright. As mentioned by Prashant Tandon, co-founder and CEO of 1mg. "more than 45 per cent of the new users on boarded were based out of non-metros. The platforms continued to get a total 30-40 per cent increase in sales compared to pre-lockdown figures. In the recent second wave, e-pharmacies reported a 25-65 per cent increase in sales"2. Increasing Internet penetration Internet penetration is increasing with use of affordable smart phone &high-speed internet. Due to this consumer from Rural & remote areas can be able to access E-Pharmacy Growth of e-commerce adoption – increasing e-commerce acceptance is complimentary

1. Changing disease profile – E-pharmacies majorly cater to the medical requirements of chronic patients. Increase in prevalence of chronic & lifestyle disease will further encourage use of E-pharmacy.
2. Serve consumer best

a. Maintain Confidentiality of patient data- The e-Pharmacy would comply with rules regarding personal information of the patients.

b. Timely availability of medicines- especially in Tier 3 and rural areas

c. Price Discount-E-pharmacy should continue medicine availability at discounted rate

Conclusion

On brief review of the E-Pharmacy industry, the current status is promising for E - Pharmacies business prospects. For this, the government needs discuss current policy with stake holders & make it further transparent & efficient for E-pharmacy.

Moreover, Government needs to ensure affordable, faster, interruption free internet connectivity to semi-rural and rural areas. Secondly E-Pharmacy players need to integrate with local retailers to facilitate timely availability of wide range of medicines at most affordable rate for consumers at semi-rural and rural areas.

Currently, E-pharmacy players working on innovative strategies to reach Tier II and Tier III cities using advanced technology like AI, offering doctor consultations and diagnostic lab services for strengthening the trust of consumers.[7]E-Pharmacies are also reaching out to consumer in regional languages for education on medicine & disease.

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IMPACT of "BE VOCAL for LOCAL" on TOYS MANUFACTURING INDUSTRY in INDIA

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ABSTRACT

The Hon. Prime Minister propounded mottos as "be vocal for local' and to a greater extent "be local for global" which have paved way for indigenous industries to have a world-wide presence. India is the ever growing and giant consumer for the majority of the product categories including toys. Undoubtedly, the proportion of young population in overall population, rising per capital income, and modernization in different segments of toys for the junior population base, the Motto "Vocal for Local" would witness a revolution in toys manufacturing industry in India. To analyze its impact, consumer perception must be observed while increasing awareness about boosting the Indian economy to make it self-reliant. The motto "Vocal for Local" would also urge the Movement "Made in India". India accounts for less than 1% with respect to the global toy market are which is worth US$ 678.30-813.96 million. The IMARC report depicts that toy sector in India shall surpass the US$ 3.3-billion by the end of 2024 while marking down a CAGR nearing 13.3% during the period of 2019 to 2024. With this, India is destined to be the global hub in the late 30th of this century. India's local toy & games industry would demonstrate a crucial role in realizing the aspirations of "Atma Nirbhar Bharat" too. Towards the efforts to make India stand out for its rich and multifarious toy production, "Vocal for Local" would prove to be influential.

Keywords: *Vocal for Local, Toys manufacturing, Made in India, Atma Nirbhar Bharat, Global presence*

1. Introduction

The Hon. Prime Minister of India in his "Mann ki Baat" narrated the motto of "Be Vocal for Local" in December, 2020. Eventually, India's First Virtual Toy Fair was organized and conducted in the month of February, 2021 where various Ministries of Government of India played pivotal role of participating, promoting and aiming to boost Indian toy manufacturing. This industry is capitalizing on the advantage of large young population between the ages 0-15, revolutionary changes brought in the consumption of toy due to COVID-19 global pandemic and Learning Management System (LMS) in education sector linked with utilization of toys for educative purposes. Toys manufacturing industry is pointing out the significant opportunities in every toy segment which can be considered as follows:

Different toys segments prevailing in India are as follows:

- Activity toys
- Sport and outdoor plays
- Ride-ons
- Puzzles
- Electronic toys
- Building and constructing toys
- Pre-school and infant toys
- Specific need toys (age wise, toys for children with special needs, tradition-based toys)
- Toys from waste material

India is a native soil of variety of traditional as well as hi-tech toys. However, considering the global exposure the nation stands out for 1.5 billion US$ only in terms of toy exports calculating to only 0.5% towards the global share. Undoubtedly, the United States of America, China, and Japan are considered to be the top three competitors in this industry whose contribution to toys manufacturing globally stand maximum.

The Indian toy market has huge benefits in the form of huge population for

consumption, diverse range of toys, specialization in innovation and creativity, skilled workforce, Cultural diversity, festive demand for toys and importance on learning & education with toys. In addition to strong economic growth, market witnesses the changed spending patterns. Indian toys market has also roped in successfully into online retail sector which provide support to many other sectors in distinct ways.

1.1 Indian Toy Market Structure

India showcases as the most important consumer for toys considering the huge population exploiting the toys. In terms of population, India ranks second largest country in the world after China with a population of around 1.3 Billion out of which almost a half of the pollution is aged below 25.

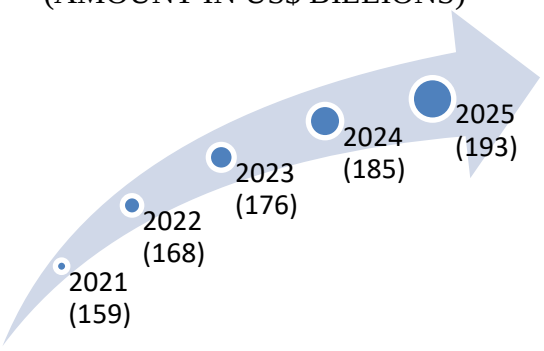
The growing domestic demand for toys in India is accelerated by the country's strong economic growth and rising per capita income. On global fronts, with consistently strong GDP growth rates since last numerous years, India is representing amongst the world's largest economies. The biggest advantage which India accounts for is widely spread Consumers base with disposable income and open markets to cater to the needs of changed pattern of spending moneys. Considering toys market, such factors have resulted in major transformation from traditional toys to intelligent toy, soft toys backed by innovation, technology and also electronic toys.

Toys market in India is majorly unorganized and large portion of toys manufacturing is being done by MSMEs as well as large scale manufactures .Almost 60% of toy manufacturers belong to unorganized sector which consists of small units with maximum 5 employees working in such units. Such units at times are not equipped with technology, not having requisite capital for increasing production capacities and fostering the expansion plans. There also exists a category of manufacturers in India who manufactures toys belonging to well-known international brands. The demand for toys varies with gender. Considering that, Unisex toys have been manufactured and consumed in India on a greater extent. The below table considers the market share of toys by gender differentiation.

TABLE I : GENDERWISE TOYS MARKET IN INDIA

ket share by gender	**rcentage**
x Toys	
or Boys	
or Girls	

FIGURE I: INDIAN TOYS MARKET SIZE BY YEAR.
(AMOUNT IN US$ BILLIONS)



1.2 Need For Transformation

In the last week of February, 2021, Hon. Prime Minister inaugurated the country's first ever virtual toy fair where more than 1000 virtual stalls participated and knowledge sessions by experts were conducted. Various Ministries of Government of India participated to

eventually boost the indigenous Toy manufacturing industry.

The toys market is filled with a wide collection of traditional as well as modern toys. Indian toys manufacturing industry mainly focused on the traditional sources of raw material and conventional methods for manufacturing toys which are made up of wood, cotton, wool, plastic, rubber and also into electronic forms. With growing technologies, there have been changes in consumer preferences. To name few, the plastic/ metal based "Lego" have widely replaced wooden/ Rubber building blocks while Kitty and Barbie dolls are more demanded than traditional cloth dolls. Thus, innovative electronic toys, intelligent toys, and up market plush toys are more demanded than traditional and manual- operated toys.

Towards innovative management, design thinking and learning linked to toys, STEM-based toys have become popular and most demanded. STEM accounts for science, technology, engineering, and math. These toys are relatable to the real world where the focus is not only to provide fun but also education to children. More than 65% parents consider that young children are benefitted from STEM- based toys which encourage mathematics and science studies.

Today's connected world comprises the Internet of Things (IoT). Thus, technology driven hi-tech toys are more demanded and loved by children. Such toys serve the purpose of learning with fun for children and also cater to the needs of parents who intend to keep track of whereabouts of their children. Connected toys use technological peripherals such as cameras, Bluetooth, microphones, Wi-Fi etc.

2. Literature Review

There are various studies on toys manufacturing in India covering the particulars including but not limited to present structure, Government initiatives, startup promotion, Innovations, developing the supply chain management.

The branded Indian toys have been replaced by the fairly cheap and easy available Chinese toys. It is projected that Chinese toys have captured almost 80% of the toy market in India. The expected productivity growth for labour and capital indicates that technology played a vital role in the overall productivity growth of Toy manufacturing sector in India. (2014)

Smart toys are popular toys among the age of 8 to 15. Smart toy is a blend of technological intelligence mixed with traditional toy which enhances the toys functionalities. To a highly developed technological savvy generation, smart toys seem to be the perfect option. (2019).

3. Need For Study

On the onset of a proclamation "Atma Nirbhar Bharat" and "Vocal for Local" by Hon. Prime Minister, the steps taken forward towards the upliftment of toy manufacturing industry must be projected to cater to the needs of unorganized sector as such where handicraft, artisans and rural industries which are largely engaged in toys manufacturing. The impact shall be analyzed and pervasive study be undertaken for achieving new milestone by toy manufacturing industry in India. Export promotions, import substitutions, quality improvement, technology advancement, innovation management are

certainly the driving forces when "Vocal for Local" be practiced.

4. Objectives

The objective of this research paper shall be to:

- analyze the impact of Vocal for Local
- evolve methods for fostering the strategies for toys manufacturing industry.
- Create awareness about government policies for encouraging exports of toys manufactured by unorganized sector.

5. Research Methodology

Several secondary sources including online data sources such as Google, Google Scholar, Toys association, IMARC, IBEF, the India Toy Fair and reputed newspapers are referred to extract the data for the study. The publications referred include research papers, Scholarly articles, concerned announcements by various ministries of Governments and articles from online newspapers and journals, etc. This information is mainly used to support the discussion and to conclude the study.

6. Result And Discussion

The objectives of the research paper are thoroughly discussed hereunder:

6.1 Analyzing The Impact Of Vocal For Local

Hon. Prime Minister made an announcement of flamboyant package worth more than Rs 20 lakh Crores while addressing to the nation in the midst of the COVID-19 Global pandemic lockdown. He focused on making India "Atma Nirbhar Bharat"- a 'self-reliant' nation. Consequent to that, he urged Indians to widely promote "be vocal for local" campaign. Such campaign was considered as an addition to the '*Swadeshi Movement*', a statement which is having highly respected legacy in the history of India.

In order to achieve the aim of 'Atma Nirbhar Bharat,' the Indian government not only wants products be made in India, but also want to promote local brands, manufacturing, and supply chains, etc. Vocal for Local campaign is been targeted mainly for local brands to strengthen them to achieve global presence. The campaign would witness strong pillars to the foundation of small local businesses on the backdrop of global pandemic facing the atmosphere of uncertainty. The mindset of free India should be 'vocal for local' while appreciating and encouraging our local products.Indians need to move forward with the mantra of Make for the world along with Make in India. To match and trail the same to toy manufacturing industry in India, it can be interpreted that the local toy manufactures must be provided with necessary infrastructure, facilities, training for increased production, fostering innovations, and widening the supply chain management for large market reach out.

To analyze the impact, following factors will be determinants:

- Scope for innovation and improvement in the existing toys segments
- Large foreign direct investment in toys sector
- Upliftment of rural areas where artisans, handicraft businesses are mainly situated.

6.2 Evolving Methods For Fostering The Strategies For Toys Manufacturing Industry

The toys market is filled with ample of innovative toys which are produced by

MSMEs, and large indigenous manufactures and also imported toys of various international brands. Methods for fostering the strategic for toys manufacturing industry are discussed below:

- **E-Commerce:**

With the evolution of smartphones and other digital media platforms, online sales channels in short e-commerce have facilitated heavy boom in India. Since the quality and features of products, prices, discounts, warranties, customer reviews and grievances can be checked and compared on various digital platforms, these e-commerce channels have proven the ever- growing speedy distribution channels for toys manufactured in India.

- **COVID-19 Pandemic effects:**

On the backdrop of COVID 19 pandemic, innovative engagement with child for learning at home must be considered. When children have been savvy with the smart phones and all digital platforms, toys with electronic features, easy learning apps, audio-video features online games, offline games must be developed for innovative learning experience.

- **Strong supply chain systems:**

FIGURE II: SUPPLY CHAIN DIAGRAM

Supply chain channel plays a very important role in the distribution function. The customer demand for particular products is being generated by the marketing channels and thus such supply chain channels play a vital role in fostering the competitive advantages to the firm. Earlier, Consumers used to buy toys from traditional outlets such as departmental stores, supermarkets, and exclusive toys stores. Sales from e-commerce platforms, hypermarkets, toys franchisee stores have increased tremendously in last 5 years. Maximum efforts be made to propagate domestic toys in pre-schools, schools, day care centers and crèches.

- **Start ups in toys manufacturing industry:**

Hon. Prime Minister urged the start-up entrepreneurs to explore the toys manufacturing sector. He insisted wide consumption of local toys and be self reliance with support of big industry players in India thereby reducing dependence on foreign goods.

Hon. Prime Minister's call of 'be vocal for local' aims to expand the country's start-up environment. The plans consist of creating more and more local brands and elevate them at a global level. Technological developments will be in place to achieve global outreach of indigenous businesses. Digital marketing will also prove as fundamental for the maximum consumer base to cover.

Promotional activities:

The India Toy Fair 2021 proved to be fruitful to analyze the strengths, capacities and prospects of toy manufacturing industry in India. The geographical diversity, customs- tradition based toys, skills based toys and specialty toys were given much focus. Hon. Prime Minister in his speech during the India Toy Fair sensitized educational institutions for organizing *"hackathons"* for students. Such efforts would bring innovations in online games, apps, toys design and

technology. He expected that such toys would also reflect Indian ethos and values.

The creation of Toy Labs was an initiative of Indian government to promote traditional toys manufacturers in the India for making an innovative Indian-theme based toys. Such labs would assist specialized toy marking with quality certifications keeping original designs where such toys would be catering to the needs of children to learn, play and innovate.

- **Growth story:**
- The domestic demand for toys in India accounts for more than 1 billion US$. However, 80% of demand is satisfied with imports mainly from China, US and Japan. Only 20% of such demand is served by the Indian toy manufacturers. On an average, the toys worth more than 600 million US$ are imported from China only because of cheap prices and plenty availability. The worldwide demand of toys is worth more than 100 billion US$ and since several decades, the United States of America, China and Japan have driven the worldwide toys market in terms of exponential sales. In 2019-2020, India exported toys worth 130 million US$ where the United States of America and United Kingdom remained the hot destinations of exported toys. Considering this export, India's share to the global market stood at nearly 0.5% which is worth 1.5 billion US$.
-

Notably, Indian presence at global market share has been growing with a strapping pace touching 15% per annum which certainly indicates a huge potential of growth of toy manufacturing industry on the global fronts. With such affirmation, the exports are anticipated to reach 2-3 billion US$ by end of 2024.

"Be Vocal for Local" campaign has brought confidence among Indian toys manufacturers for proving their presence and brand power at the global stage. SO far as the existing big bands in India, they changed their strategies of business and decided to focus on 'Indian and indigenous' as big motto and layout. MSMEs would earn significant benefits because of such campaign backed by the financial stimulus package of worth Rs 20 Lakh Crores announced by Hon. Prime Minister.

6.3 Creating Awareness About Government Policies For Encouraging Exports Of Toys Manufactured By Unorganized Sector

It is anticipated that the Indian Companies dealing with the imported toys would concentrate more rather on exploring Indian brands due to increase in existing custom duty in India. The existing custom duty of 20% would be increasing to 60% which ultimately would put a damper on importing the toys from abroad. The Department for Promotion of Industry and Internal Trade (DPIIT) invites not only the large-scale manufacturers of India to pump in investments in toy manufacturing industry but also top global toys making brands to invest and plan to discuss Indian-themed toys.

7. Conclusion

In this Review Paper, I have acknowledged current works of various researchers from the diverse range of Public Administration and attempted to find out the Impact of Vocal for Local on toys manufacturing industry. I have tried to concentrate on the impact, strategies and driving forces for evolution in toys manufacturing in India.

The expensive imported toys destroyed the concept of collective gaming and

demonstrated that the child would be engaged standalone. The working class parents usually like the idea of letting their child sit alone and play with such toys peacefully. However, the psychological factors are ignored where the basic needs of child would be to engage with like-minded, same aged children and needed motivation and appreciation at every stage of progress.

Finally, I conclude while expecting transformations in toys manufacturing and consumption patterns with rigorous efforts to turnaround a situation in toys markets. The government policies, subsidies, technological advancement, training for Upliftment of existing unorganized sector, media and promotions, strong distribution network etc. are the driving forces along with the mantra of Vocal for Local.

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A COMPARATIVE STUDY OF MARKETING STRATEGIES OF SELECTED PHARMACEUTICAL COMPANIES." – A LITERATURE REVIEW

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ABSTRACT

A study was undertaken with the objectives of studying the concept of marketing strategy of pharmaceutical companies, understanding the differences in marketing strategy of Pharmaceutical companies, investigating impact of marketing strategies on sales of Pharmaceutical companies, analyzing the impact of marketing strategy and Branding of Pharmaceutical companies on consumer Perception, and, evaluating challenges and opportunities for Pharmaceutical companies. Before the full-fledged study was undertaken a literature review was carried. This paper presents the same and leads to the research gap that prompted the study.

Keywords: *Marketing Strategy, Pharmaceutical Companies, Literature Review,Consumer Perception,, Evaluating Challenges*

Introduction

Marketing strategies must empower a company to develop responsiveness to the present challenges and to anticipate the future requirements of the market, for which the company need to prepare in terms of its commitments and offers. Pharmaceutical industry has been changing in a fast speed due to globalization of the markets, combination of the world pharmaceutical industry and expanded competitiveness of the industry due to innovations and expanded alliance through mergers and acquisitions of the firms are responsible for the high concern of marketing individuals in this field. Pharmaceutical markets have experienced unpredicted changes, being research oriented, knowledge based and capital intensive industry it calls for high attentiveness of the policy makers. For marketing products effectively companies need to engage themselves in understanding the most recent developments and strategic moves of the competitors, for which they are compelled to more concentrate on research and development for improving the offers and fortify the sales force to make the offer to arrive at the target market. In this manner, marketing of pharmaceutical products is challenging field of business, where the achievement relies upon the quality, the people, technology and strategies.

Like in other industry, pharmaceutical companies have an extreme area of achieving customer satisfaction and the resultant advantages in the form of brand loyalty, increased market share, increased sales, high revenue and profits. As stated by Bartlett and Ghosal (1989), attainment for companies of today and tomorrow will be those one who might be able at the same time to satiate local needs, expanded global usefulness and strive for constant innovation and pledge worldwide learning. In this way pharmaceutical companies and industry largely depends upon the market orientation of the companies and their capacity to comprehend the customers' expectations and means to match them with right type of products, message, delivery and pricing strategies.

A literature review was carried in this context with the following objectives:

1. To review literature on marketing strategies in general,
2. To review literature on marketing strategies of pharmaceutical companies,
3. To review literature on impact of marketing strategy on sales performance of pharmaceutical companies,
4. To review literature on impact of marketing strategy and branding of pharmaceutical industries on consumer perception and

To review literature on challenges and opportunities for pharmaceutical industries

This paper presents select reviews under related themes.

Review Of Literature

Marketing Strategies In General

According to Jain, A., et al. (2020), the notion of green manufacturing has gained traction among manufacturers as a result of government requirements and increased customer ecological concern. Firms are rethinking their marketing strategies in light of the fact that green manufacturing can yield long-term economic and environmental benefits when enormous efforts are directed toward green marketing.Despite the fact that many academics have researched the significance and conceptual evolution of green marketing, none have investigated the approaches in a multi-criteria environment and from a multi-stakeholder perspective, which is the study's curiosity. In this example, a real-life instance of a manufacturing corporation that needs to choose an appropriate green marketing plan from four available strategies for promoting its newly introduced green product, namely

I. Defensive Green,
II. Lean Green,
III. Extreme Green, and
IV. Shaded Green.

Marketing Strategies of Pharmaceutical Companies

1)According to Crick, J. M., et al. (2020), while competition (simultaneous collaboration and competition) should categorically effect firm efficiency, it is unclear how these business-to-business marketing tactics may be implemented during large-scale crises. As a result, this paper explores how corporations exploited rivalry to deal with the novel Coronavirus (COVID-19) pandemic, influenced by resource-based theory and the relational perspective. Key examples include retailers sharing stock-level data, pharmaceutical businesses working together to develop a vaccine, technological behemoths partnering for the greater good, and charities forming alliances for a common goal. This study adds to the current literature by emphasising the variety of cooperative approaches that businesses can use in the midst of a global crisis. Cooperation practitioners must weigh the risks and benefits of their work.As a result, they must determine whether to continue assisting their competitors after the pandemic has ended, or to continue operating under original business principles. This paper concludes with some recommendations for future research.

2)The test drive approach, according to Adler, R. M. (2020), aids important decisions about minimal strategy. The image focuses on strategic marketing decisions in the pharmaceutical industry. Sections 10.1 and 10.2 describe the structure of the prescription medicine industry as well as how pharmaceutical companies market to this sector. Section 10.3 exhibits a test drive model for competitive drug marketing decisions, whereas Section 10.4 depicts the results of a test drive simulation and inspection for a realistic critical marketing decision. Section 10.5 discusses why the decision test drive solution outperforms alternative investigative approaches.

Impact Of Marketing Strategy on Sales Performance of Pharmaceutical Companies

1)Kumar, P., et.al (2020) stated that marketing strategies stimulate the firm to unearth areas that are being disturbed by several factors. This is embraced to decide the target market in order to accomplish prosperity in the organization. An effective marketing strategy would possibly help in captivating new customers as well as sustaining for the longer-term. Thus, this can bring about the accompanying advantages such as products and services can be offered with exclusive components, viable department coordination, concentration on scarce resources, subsequently building a better marketing plan, selection of target market for easy entry and accumulation of 4 marketing p's. Accordingly, the increase in sales can be accomplished. The strategy ought to be viably formulated to witness the performance results. This study focuses on the determinants of marketing strategy on performance results. The information captured from 119 marketing professionals in the field of the biomedical healthcare industry

by utilizing a questionnaire. The questionnaire incorporates variables to measure the demographic profile of the professionals and 3 constructs of marketing strategy creativity, marketing strategy improvisation, and performance result. Collected data were analyzed through analysis of frequency, variance, mean, and regression. Results show that marketing professionals have comparable perspectives on marketing strategies. The findings of the regression analysis contend that the improvisation determines performance results in the marketing strategy.

2)According to Arrawatia, M. D. M. A. (2019), the pharmaceutical sector in India is rapidly expanding in all areas, and it is therefore necessary to analyse marketing and sales insights. Regardless, the relationship between sales and marketing and its impact on corporate success remains an undiscovered territory in a variety of industries, particularly the pharmaceutical sector. Because of the aforementioned shortcomings, the primary purpose of the proposed study was to analyse the impact of sales and marketing on the business performance of chosen pharmaceutical enterprises in India. Small and medium-sized firms (SMEs) play a key role in the development of the Indian pharmaceutical sector, accounting for more than 40% of industry turnover and supporting 48% of the country's pharma. Because the pharmaceutical industry is one of India's emerging industries, sales and marketing tactics have had a considerable impact on its growth.The current study examined the marketing and sales tactics employed by pharmaceutical companies to boost their bottom line using a cross-sectional and explanatory methodology. The most often used research models in social science research are positivist realism and interpretive approaches, with specific research procedures being qualitative and quantitative methods. The nature of the subject under inquiry, as well as the researcher's personal experience, would influence the paradigm of choice. The study will employ a hybrid approach, combining interviews and structured questionnaires aimed to elicit information about the research aims.

Impact Of Marketing Strategy And Branding Of Pharmaceutical Companies On Consumer Perception

1)Malaysia is ranked sixth in the Asia Pacific region for obesity and diabetes, and first among Southeast Asian countries, according to Tajuddin, U. N. R. A. et al. (2020). Obesity and diabetes can lead to life-threatening noncommunicable diseases such as hypertension and heart disease. Buying and eating habits are intricately intertwined, and e-word-of-mouth has a tremendous influence on these behaviours (e-WOM). However, a scarcity of study in this field makes reaching an agreement on the relationships between the variables involved difficult. The purpose of this study was to investigate the association between e-WOM and customer purchase intent among Malaysians who utilise dietary supplement products.The brand image was established as a moderator between e-WOM (quantity, quality, and sender expertise) and customer purchase intent. To analyse 213 survey usable sets, the Partial Least Squares Structural Equation Modelling (PLS-SEM) approach was utilised.

According to the data, e-WOM quality, e-WOM quantity, and sender skill all have a strong relationship with consumer purchase intention. In any case, there was no moderating influence of brand image on the connection between e-WOM quantity, e-WOM quality, sender skill, and customer purchase intention. This study contributes to the body of information on e-WOM, which influences client purchase intentions.

2)According to Srivastava, R. K., et al. (2018), the study's goal is to investigate customers' attitudes regarding over-the-counter (OTC) items as well as the factors that impact (OTC) products in India. It also intends to investigate the impact of demographic factors on customers' purchasing behaviour for (OTC) items. The inquiry is intended to be exploratory in nature. It is based on first-hand information. A questionnaire is used to collect primary data. Thirty respondents took part as a test case to help understand and evaluate the questionnaire. The information gathered is used to identify consumers' attitudes toward

over-the-counter (OTC) products. It was completed between the 1st and 30th of October, 2015.The responders are from Mumbai, a metropolis, and Nasik, a populous class city. A total of 180 people were chosen at random to take part in the survey. There were ninety responders from Nasik and ninety from Mumbai. Respondents were contacted at random. The perception of OTC among consumers is taken into account. Demographic considerations are also taken into account when comparing impressions between two cities.According to the findings of the study, there is a substantial variance in perception of OTC based on age and gender. Doctors' recommendation, pharmacists' advice, brand name, previous experience, prior awareness, safe to use, friends' advice, and user testimonials are all factors that influence OTC product buying behaviour. This is the first time an evaluation of emerging markets such as India has been conducted in comparison to western nations with well-developed marketplaces.

Challenges And Opportunities For Pharmaceutical Companies.

According to Procopio, A., et al. (2020), this part includes the source material qualities commonly established in polymers to 3D printing technologies and drug delivery applications. A few published examples are used to show the benefits of various technology as well as the drawbacks of others. Furthermore, due to the novelty of this technology, a short examination of the regulatory impact and implementation of 3D printing in a clinical and commercial scenario is presented.

CONCLUSION AND RESEARCH GAP

Most of the studies have a generalized approach towards studying the marketing strategies of organizations in general and also for the pharmaceutical companies. Comparative analytical studies based on company specific characteristics are not found much. If a pharmaceutical company is dealing in main product line while other is research and development oriented, does this factor affect the marketing strategy? This question has not been answered by researchers. And if the strategies are different what are its implications on sales, consumer perception etc. have not been studied.

In the backdrop of the gap, following questions were formulated for investigation:

RQ1 – How do marketing strategies of pharmaceutical companies compare?

RQ2 – What is the impact of marketing strategies on sales of pharmaceutical companies?

RQ3 – What is the impact of marketing strategy and branding of pharmaceutical companies on consumer perception?

RQ4 – What are the challenges and opportunities for pharmaceutical companies?

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A Study on Consumer Attitude towards Branded Smartphones in Rural Area

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ABSTRACT

Consumer durable goods are lifestyle and status improving goods. With amplified advertisement efforts made by all companies, these products are becoming familiar with rural market. Unbranded durable products are attracting consumers on the basis of lower price positioning. But in long-term these products tend to be costlier as their quality is poor so they lead to more maintenance. Also, the user's safety is under question mark with the use of these products. Present research will assist the branded Smartphone companies to know the attitude of consumers from rural market. This in turn will increase their market share and also invisibly help to improve the lifestyle of customers from rural market by offering them more value satisfaction.

Introduction:

As the world's second-fastest-growing economy, India's consumer class is rapidly expanding, resulting in tremendous expansion in the consumer durables sector. The demand for consumer durables has remained consistent and is anticipated to remain so in the next years, thanks to rising income levels, simple access to credit, and improved awareness of new goods and models. According to a McKinsey analysis, India's overall consumption is expected to double in the next decade. In the worldwide consumer confidence survey, India ranks top with 131 index points (Nielsen 2011).

Revenue from the consumer durables sector reached USD 9.7 billion in 2015 and is predicted to reach USD 12.5 billion in 2016. (IFBI, January, 2016). India's electronics sector is predicted to grow to USD400 billion by 2020, up from USD94.2 billion in 2015. By 2020, production is estimated to exceed USD104 billion. Up to the financial year 2020, the consumer durable industry is predicted to increase at a CAGR of 13%. (IFBI, January, 2016).

India's handset market, which is one of the world's largest, continues to expand year after year. Due to the limited number of models on the market, high handset pricing, expensive tariffs, and restricted network coverage in the early 2000s, mobile phones were often only found in significant urban centers and primary cities. With the advent of more global brands and the growth of homegrown manufacturers in the handset industry in recent years, the situation has altered. From 2 million in 2000 to 1009.32 million in 2015, the number of mobile subscribers has increased dramatically (Telecommunication Statistic). In May 2016, India has a total of 1033.20 million cell phone subscribers.

Research Problem:

The fact that a large chunk of India's population (about 69 percent) lives in rural areas highlights the need for a better understanding of the rural market and rural marketing phenomenon. Rural market consumers differ from their urban counterparts in a number of ways (A. Sarangpani, 2009). In the case of consumer durables, just 35 percent of sales come from the rural market, while 65 percent come from the urban sector (ASA & Associates LLP, July 2016). Despite this, the penetration of branded products in the rural market is lower than in the urban market. Furthermore, branded products account for only 10% of the consumer durable market, which is lower in rural markets than in

urban markets (IBEF, 2015). Given the price sensitivity of the Indian rural consumer, low-cost, feature-rich, and locally customized chip designs, as well as a strong distribution network, are all important concerns in the rural market. According to a study, the prices of non-branded smartphones have dropped by 50% in the last year. That suggests a mid-range smartphone cost around Rs. 20,000 in 2014. In 2015, the same configuration costs around ten thousand dollars or less. It is very complex for branded companies to attract and retain the price sensitive customer's base in rural market. Hence to understand value expectations, perceptions and attitude towards branded Smartphone's have become crucial for these companies. This research is aimed to search answers for the following questions:

1. Do consumers in rural market possess unfavorable attitude towards branded Smartphones?
2. How consumers perceive or evaluate various features of Smartphones?
3. Is the price only factor which influences consumers' attitude and intern their purchase decision of Smartphones in rural market?
4. Does consumers' attitude towards branded Smartphones influence their purchase intention?

Literature Review:

Attitude is defined as a "knowledgeable predisposition to respond in a good or negative manner to a situation" (Huang, Lee, & Ho, 2004). According to (Bagozzi & Dholakia, 2002), the most widely accepted definition of attitude is that it is a judgment, such as a spiritual predisposition, that is transmitted by rating a certain object as good or negative. According to (Cole & Woolger, 1989; Emler & Reicher, 1987; Wee et al., 1995), sentiments about counterfeit branded products are inextricably connected to fake merchandise purchase intent. People are willing to acquire non-genuine products because of the low pricing and ease of availability in comparison to their liable counterparts. Gentry, Rizza, and Gable (M. Gentry, Rizza, & Gable, 2001) Customers who cannot afford genuine branded products but wish to obtain the image and enjoyment associated with owning such products can find a realistic fantasy among counterfeit branded product manufacturers.

Research Gap:

Consumer attitude is one of the significant psychological factors that influence consumer purchase intention. Attitude towards product is widely studied in many research projects but attitude of rural consumers towards smartphones is yet not covered in any previous research, also the relationship between attitude and purchase intention for smartphones in rural market is not yet studied.

Objectives of Study:

Present research strives to explore the attitude of rural consumers towards Branded Smartphones. The objectives of this study are:

1. To study the Attitude of rural consumers towards various features of Branded Smartphones.
2. To examine the relationship between consumer attitude towards branded consumer durable products with their purchase intention.
3. To investigate the impact of various factors on the preference of rural consumers towards branded Smartphones.

Research Methodology:

The research design adopted for study is preliminary descriptive in nature. Exploratory kind of research will also be undertaken to collect secondary data from various sources for formulation of hypotheses, objectives and to gain an insight in to the variables required for this study.

Data Collection:

Both Primary and Secondary data will be required in this study. Primary data will be collected through direct contact method with the help of structured schedule. Secondary data

will be collected from government publications, Consumer Durable Industry statistics, Information about rural area will be collected from census reports.

Sampling

The study will be undertaken in rural area of Pune district. The rural area will be identified based on the definition of rural area given by RBI and NABARD (National Bank for Agriculture and Rural Development). There are 14 Tehsils in Pune district out of them two tehsils viz. Baramati and Indapur are conveniently selected for this study. Baramati tehsil has 116 villages and Indapur tehsil has 114 villages. 20 villages from Baramati and 20 from Indapur are selected based on cross tabulation of population and proximity.

Sample Frame: 40 Villages from Baramati & Indapur Tehsil.
Sample Unit: Users of Smartphones in selected villages.
Sampling Universe: The total population of 400 villages (1, 07,513)
Sampling Technique: Simple Random Sampling
Sample Size: The sample size of 400 is calculated using statistical formula

Sample size $n = \frac{N}{1 + N(e^2)}$

Research Instrument: Primary data is collected using structured schedule. The schedule is to be specifically designed keeping in view the objectives of the study.

Findings:

Table No 1 Attitude of Rural Customers towards Branded Smartphones

Feature/Benefits	Mean	SD	Rank
Durability	4.35	1.92	1
Processing Speed	4.22	1.05	2
Display Quality	3.98	2.01	4
Battery Backup	4.12	1.85	3
Camera Quality	3.93	1.97	5
Price/Value for money	3.65	1.65	6

(Source: Primary Data)

Above table depicts that, rural consumers have favorable attitude towards features of Branded Smartphones. All features are rated favorably by maximum customers. Durability of branded smartphone has more favorable response (with mean value 4.35) compared to other feature. Price/ Value for money is ranked lowest at 6th position with mean 3.65 which indicates that the prices of branded smartphones are perceived higher and consumers have less favorable attitude towards value for money.

Table No 2. Relationship Between Consumer Attitude and Purchase Intention

Descriptive Statistics

	Mean	Std. Deviation	N
Consumer Attitude.	4.40	.725	400
Consumer Purchase Intention..	4.38	.753	400

Pearson Correlations

	Consumer Attitude.	Consumer Purchase Intention
Consumer Attitude.	1	.676
Consumer Purchase Intention.	.676	1
N		400

(Source: Primary Data)

Pearson correlation coefficient was calculated for 400 respondents. The correlation value of 0.676 represent high positive association between Consumer Attitude

towards Branded Smartphones and their purchase intention.

Table No. 3. Impact of Various factors on Preference of Rural Consumers towards Branded Smartphones

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	**1.088**	.210		5.179	.000
Social Influence.	.040	.090	.042	.442	.659
Product Scarified	.052	.041	.073	1.274	.204
Product Attributes	.213	.073	.221	2.924	.004
Brand Name	.210	.054	.274	3.908	.000

(Source: Primary Data)

The regression analysis is performed for factors influencing the consumer purchase preference of Branded Smartphones. Beta values of all factor are calculated using multiple linear regression. Product Attribute and Brand Name are the two most influential factors with positive coefficients. The Social Influence and Product scarified has less favourable impact on purchase preference of Branded smartphones.

Conclusion

It can be concluded from analysis of primary data collected from consumers that, consumers under study possess favorable attitude towards branded smartphones. All features/ benefits have more favorable ranking except value for money which has low rank. It is evident that there is high positive association between consumer attitude and their purchase intension. The Product attributes and Brand Image are the two important factors influencing the preference of consumers for purchase of branded smartphones.

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IMPACT OF TECHNOLOGY ON AGRICULTURAL BUSINESS AND ITS PRODUCTIVITY MANAGEMENT.

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ABSTRACT

Technology is one of the successful key for the business development. The agricultural technology is crucial role in the business development. The advantages of new innovative technology are applicable and its output will be very fast in the business system. The farmers and Agri entrepreneurs has developed it growth of business. The Indian and other country in which technology has beneficial for productivity management. The technology is Green house management, precision technology, block chain, Nano technology, Data analytics, and Genetic modification etc.Indian in which technology play important role, in the Economy development.

Key words: *Technology, Agriculture, Economy , Business Development, Nano Technology*

Introduction

Technology play important role in the Agribusiness management system. The technology has tremendous impact on the agri business development. Indian economy is depends upon the agriculture sector. Agricultural business growth development is successful due the technology adaptation In various business. The changes are done in the agriculture business like that agricultural base industry, Food process industry, Farming management, marketing of agricultural commodity, machinery development, organic fertilizer production, Flower business, Poultry farming Mushroom farming greenhouse hydroponics production etc. In new era modern agricultural drone, satellite photography and sensor, weather forecasting automated irrigation, soil management is applicable in agribusiness system. The utilization of the technology it will impact on increasing productivity, increasing yield, reduce the maintenance cost, and save time for business output.

Objective

1) To known the technological impact on Agri business development
2) To understand the technological factor which help for productivity management
3) To improve product service and agri business model.
4) To develop decision making activity in the business system.
5) To know the new innovative agricultural technology for business development

Theoretical Background

Technology play important role in the business process system. Technological innovation is more important in modern agri business system, now a day's business industry face the many challenges in production, market the major innovation technology in agricultural business such as vertical farming, automation robotics livestock technology, modern green house, practices, precision agricultural and Artificial technology and block chain . The traditional process business development is not capable for the more quantity of production, so the new desirable technological changes are essential for business development. The utilization of the new innovative technique is lot of change in agri business system. The production and maximum output of agri business is done it has great impact on the economy development. The India gross domestic product, employment sources Green revolution are occurred if the changes

are done due to the technology. One of the important thing that the new innovation technology applicable in the agri business. Foreign direct investment investing agri sector so FDI play vital role in the agribusiness sector Development and economy development. The agri entrepreneur face the problems in agri business start up and it policy it can be overcome by advance agri technology in the field. The technological great impact on agricultural business

1) To increase the productivity
2) Better management of cost and efficiency
3) It can save the time.

Research Methodology

In the Research Methodology Primary and Secondary data is collected from the different sources. Questionnaire were filled from the respondent and collected. The research method data is collect through different sources various books, Journals, Website etc.

Analysis And Discussion:

The technological change is observed in the Agricultural sector old technology and new innovative method is change the agricultural business. This new researching agri innovative technology overcome on the different challenges which can be face the Indian farmer, Agribusiness entrepreneur and researchers.

A) Production In The Agricultural Sector Using The New Technology

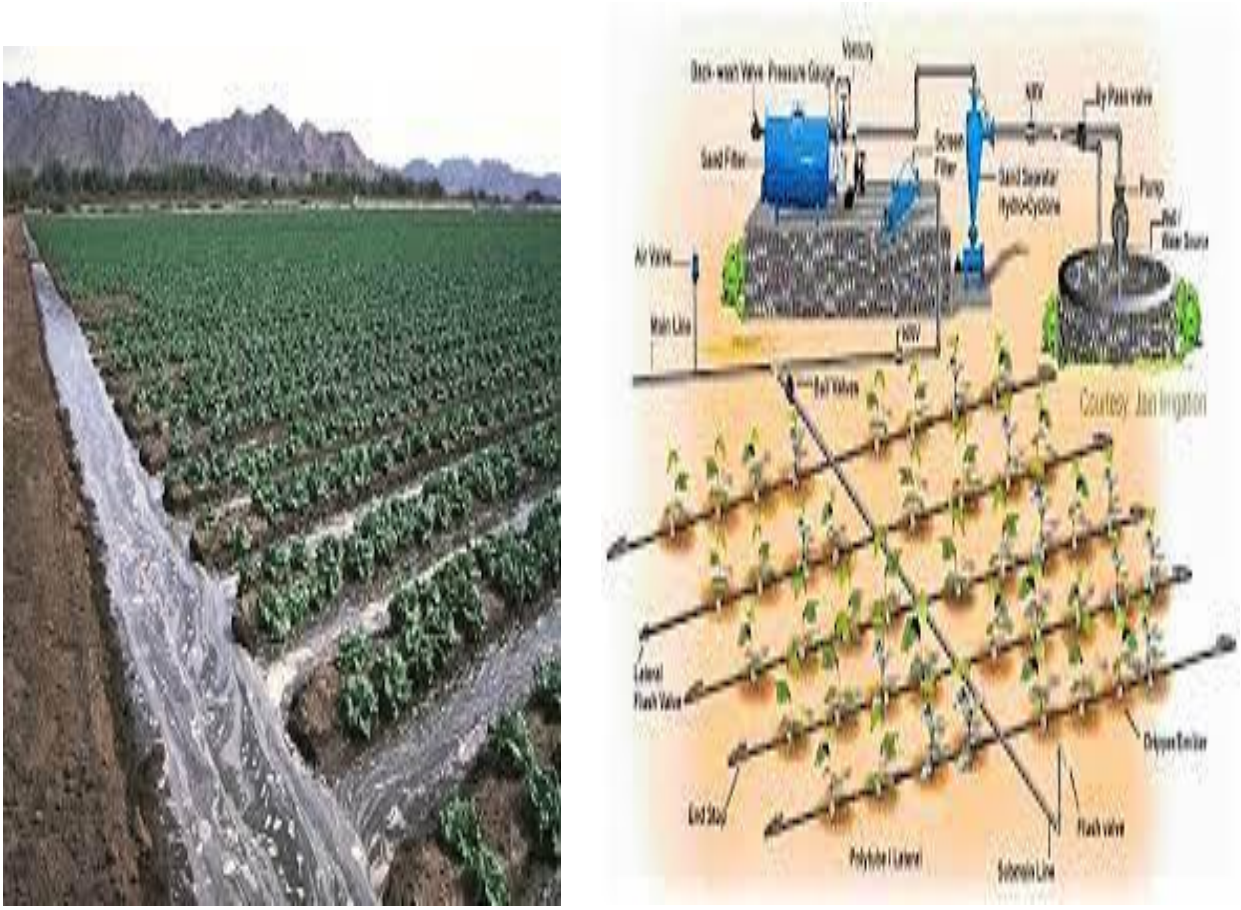


Figure.1 Drip Irrigation Technology

Bioplastic Technology

Figure.2 Bioplastic Technology

Hydroponic Technology

Figure.3 Hydroponics Technology

B) Use New Technology To Bring Food Production-
Vertical Farming-

Figure.4 Vertical Farming Technology

3 D PRINTING-

Figure.5 3 D Printing Technology

Genetic Modification-

Figure.6 Genetic Modification Technology

C) **New Innovative Industrial Technologies In Business Industry –**
Drone Technology-

Figure.7 Drone Technology

Data Analytics

Figure.8 Data Analytics

Precision Agriculture

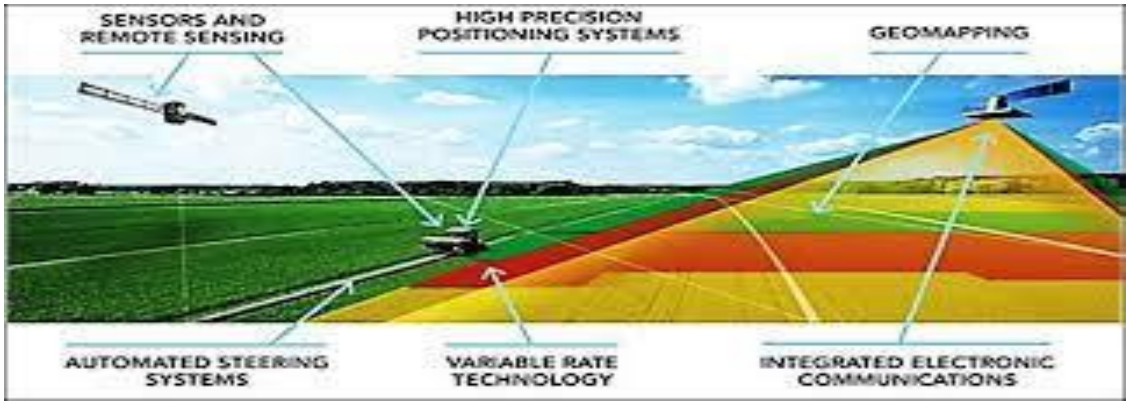


Figure.9 Precision Agriculture Technology

Nano Technology

Figure.10 Nano Technology

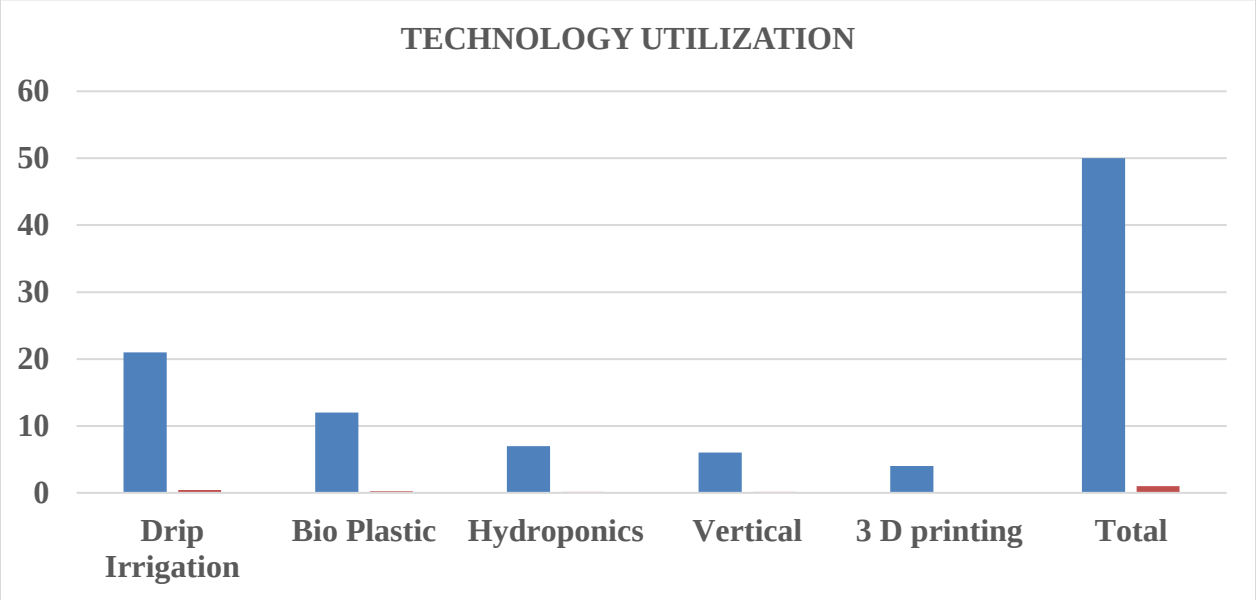
Analysis # Technology Utilization

The data collected from the respondent and tabulated as follows.

Technology	**Number of Respondents**	**Percentage of Respondents**
Drip Irrigation	21	42%
Bio Plastic	12	24%
Hydroponics	07	14%
Vertical	06	12 %
3 D Printing	04	08 %
Total	**50**	**100%**

Table: Analysis of Technology Utilization by the Respondents.

The graphical representation of data is as follows.



Interpretation

From the above analysis it can be interpreted that 42% respondents agreed for the Drip Irrigation, 24% respondents agreed for the Bio Plastic, 14% respondents agreed for the Hydroponics, 12% respondents agreed for the Vertical, 08% respondents agreed for the 3 D Printing technology.

Findings

1) The new innovation technology in the agribusiness is necessary for the growth of business.

2) The cost of business and time for more profit it require the innovation.

3) Indian farmers and entrepreneur are overcome on the challenges, which will generate in the farming and it business process management system.

4) The adaptation of technology in agricultural business it will automatically boost up the growth of Agricultal engineering and other agri input industry.

Conclusion

1. The maximum output from the business and farming innovative technology play an important role.
2. Increase the business output or production due to the technology it will helpful for economical growth development.
3. Lot of post harvest technological changes in farming and business system are development due to the utilization technology resources.
4. The future scenario of agricultural business is depends on the new Agri technology because it has solve the difficulties in the business system.
5. The Agri entrepreneur has developed abilities to shape own business and significant stock in the business venture.

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AWARENESS REGARDING FOOD SAFETY TRAINING PROGRAMME AMONGST FACULTY MEMBERS OF HOSPITALITY STUDIES

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ABSTRACT

Food Safety Standards Authority of India (fssai) has laid down standards regarding food safety. Faculty members of Hospitality Studies should be aware about all food safety standards and they are supposed to undergo training about it, so they can pass on this knowledge to their students. This study pointed out that 30% faculty members have completed the 'FOSTAC' (Food Safety Training and Certification) by FSSAI (Food Safety Standards Authority of India), HACCAP food safety training or hazard. Within which 68% faculty members found the library collection and services partially useful, 22% found it fully useful to complete the FOSTAC & HACCAP courses. Researcher has also tried to find out the purpose of their visit to library, wherein the faculty members have given fifth rank 'to get information on Hotel related trainings like FOSTAC, HACCAP etc'.

Keywords: *Food Safety Training; FSSAI; FOSTAC; HACCAP; Hospitality Studies; Hotel Management; Faculty Members.*

Introduction

Training of food safety is essential for the faculty of Hospitality Studies. Hospitality Studies is the base from where students get excellence and knowledge about the food production, food & Beverage Service, Accommodation etc. Hospitality Studies build in the students towards 'Entrepreneurship'. It develops train and build in the skills in them to become an entrepreneur who can find the opportunities from the available assets and also contributes towards the growth and development of the society. This course also build in various skills in students from where they can get an opportunity with Hotel Industry, Spas, Resorts, Restaurants, Bars, Clubs, Fast Food Chains. They can also get an opportunity in Airline, Kitchens / In Flight Operations, Cruise Liners, Indian Navy, Indian Army, Hospitality & Catering Services. Wherever the students will grab the opportunityor start his/her own business food safety is the base. They must know all about the preparation of food, its handling, and its proper storage to prevent foodborne, illness & injury. So first of all faculty members should get into the food safety training programme then they can pass on the knowledge to students.

Problem Statement

Researcher has revealed the awareness regarding food safety training programme amongst faculty members of Hospitality Studies, usefulness of library collection and services to complete the courses and purpose of their visit to library.

Scope of the Study

Researcher has covered the hotel management colleges affiliated to SavitribaiPhule Pune University, Pune.

Objectives of the Study

1. To know about the awareness regarding food safety training programme amongst faculty members.
2. To identify usefulness of library collection and services to complete the courses.
3. To find out the purpose of the visit to library by the faculty members.

Research Methodology

Researcher has collected the data by using the questionnaire prepared through 'Google forms'. It helped to collect the data easily from the facultymembers of Hospitality Studies.

Population of the Study

Researcher has considered the full time faculty members of the Hospitality Studies institutions affiliated to Savitribai Phule Pune University, Pune. There are total thirteen number of hospitality studies colleges affiliated to SPPU.

Sample for the Study

Researcher has decided the sample size as per Krejcie and Morgan table. Accordingly, the sample size of respondents for the faculty population is 108 out of 143 size of population.

Literature Review

Khandke and Mayes (1998) guided about the systematic implementation of HACCP plan, wherein they focused on transfer of ownership of the HACCP plan, training for implementing it and about its maintenance. Taylor (2001) identified the slow uptake of HACCP in small companies in regards to the production of safe food. He discussed about barriers in implementing HACCP which talks about the need of training in implementing it, requirement of technical expertise and the constraints of time and money. Kumari and Kapur (2018) evaluated the compliance to food safety and hygiene standards in catering establishments of Delhi, wherein they found the need to improvise the sanitary conditions.Lake (2018) noticed underperformance in terms of trade and food safety while studying the South Asian free trade agreement. Kumari and Kapur (2019) discovered the need of continuous training to be given to the food handlers to produce safe and hygienic food.

1. **FOSTAC**: "Food Safety Training & Certification is a large scale training programme for the food business operators".
2. **HACCP**: As defined by the Food and Drug Administration, "HACCP is a management system in which food safety is addressed through the analysis and control of biological, chemical and physical hazards from raw material production, procurement and handling to manufacturing, distribution and consumption of the finished product". HACCP is a tool which assesses the hazards and found control systems which focuses on preventive measures instead of testing of end products.

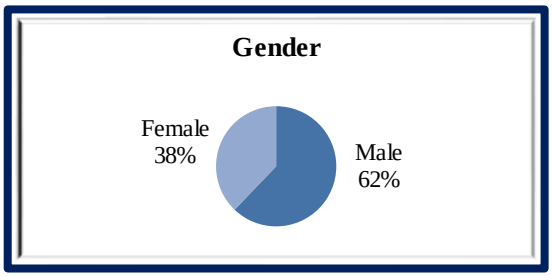
"HACCP is a system which identifies, evaluates, and controls hazards which are significant for safety".

Data Analysis and Interpretation

Researcher has collected the data from the respondents through questionnaire. Researcher has received 74 responses i.e. 68% response received from the sample population.

From the received data, it seems that 62% maximum numbers of faculty members are male.

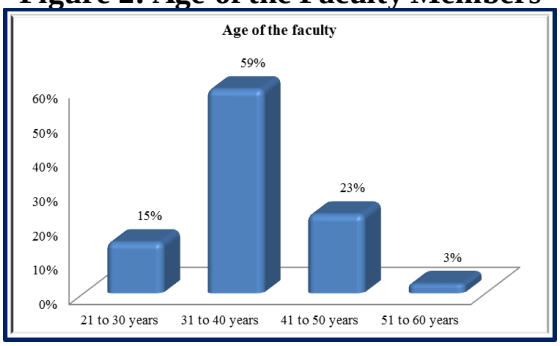
Figure 1: Gender of the Faculty Members



Source: Primary Data

Figure no. 1 demonstrates that the Hospitality study is male dominant field, as 62% [46] faculty members are male and only 38% [28] faculty members are female.

Figure 2: Age of the Faculty Members

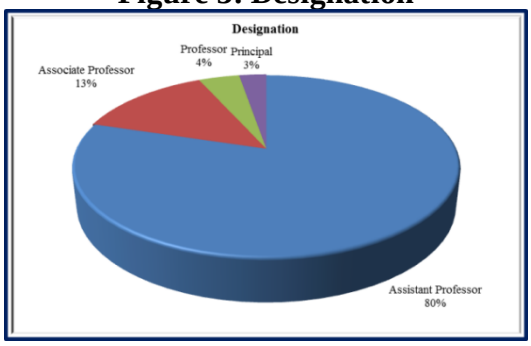


Source: Primary Data

Figure no. 2 clearly indicate that, most of the faculty members i.e. 59% [44] in hospitality studies are young between 31 to 40 years, followed by 21 to 30 years 15% [11], then between 41 to 50 years 23% [17]

and only 3% [2] faculty members are from the age group of 51 to 60 years.

Figure 3: Designation



Source: Primary Data

As shown in figure no. 3 most of the respondents i.e. 80% [59] are Assistant Professor, 13% [10] are Associate Professor, 4% [3] are Professor and 4% [2] respondents are Principals.

Figure 4: Teaching *Experience*

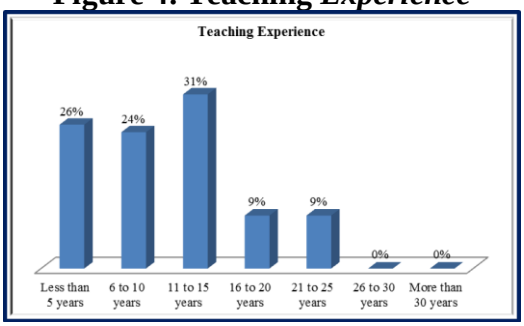
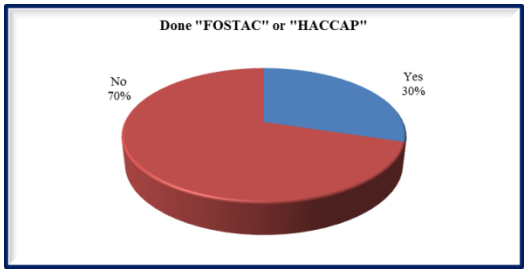


Figure no. 4 indicates that Most of the faculty members i.e. 31% [23] have 11 to 15 years' experience. 26% [19] of them have less than 5 years' experience, 24% [18] of them have 6 to 10 years' experience, 9% [7] faculty members have 16 to 20 years' and 21 to 25 years' experience.

Figure 5: Completed the "FOSTAC" [Food Safety Training and Certification] by FSSAI [Food Safety Standards Authority of India], HACCAP Food Safety Training or Hazard



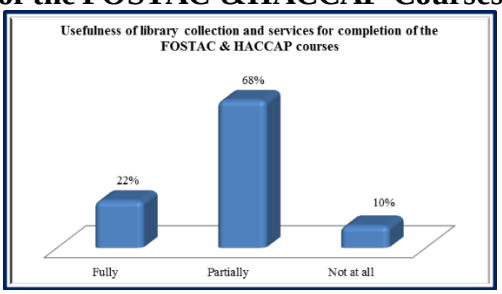
Source: Primary Data

Figure no. 5 explains that only 30% [22] faculty members has completed their FOSTAC [Food Safety Training and Certification] by FSSAI [Food Safety Standards Authority of India], HACCAP food safety training or hazard analysis and risk based preventive controls.

Usefulness of library collection and services for completing the courses:

The aim of this question to know whether the collection and services of the library is useful to the faculty members for completion of the FOSTAC, HACCAP or hazard analysis and risk based preventive controls training & certification.

Figure 6: Usefulness of Library Collection and Services for Completion of the FOSTAC &HACCAP Courses



According to the figure no. 6, 68% [47] faculty members, library collection and services was partially useful for completion the courses, 22% [15] said that it was fully useful, 10% [7] find it not at all useful.

Table No. 1: Purpose of Visit to Library (See Appendix)

Researcher has tried to find out the purpose of the visit to library by the faculty members.

The question was asked to know the purpose of faculty member's visit to library.

The question was analyzed by using a Likert scale. A Likert scale of Always – 5 to Never – 1. (Always=5, Frequently = 4; Sometimes = 3; Rarely = 2 and Never = 1)

Thus scores were obtained and used to rank to know the purpose of faculty members' visit to library such as for availing library services like issue, return,

reservation, to avail library facilities like Inter Library Loan, Photocopy, to refer the information sources like books, journals, project reports, newspapers, to access e-resources, browsing the internet, browsing the YouTube videos, to prepare lecture notes, to get information on hotel related trainings like FOSTAC, HACCAP etc.

The data presented in Table No. 1 displays that 'To refer the information sources like books, journals, project reports, newspapers' scored at top i. e. 333 securing first rank. '**To get information on Hotel related trainings like FOSTAC, HACCAP etc.' scored 271 securing fifth rank** and 'To avail library facilities like Inter library loan, photocopy' was the least mentioned purpose of visit to library.

Conclusion

Faculty members of Hospitality Studies should be aware about all food safety standards and should take training of it, so that they can able to provide the essential knowledge to their students. Librarian can also develop the library collection, Food Safety Training Manual and provide essential services to the faculty members which can assist the faculty members to gain more knowledge.

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VIRTUAL COMMUNICATION - A TREND IN THE NEW NORMAL: COMPREHENSIVE BIBLIOMETRIC SURVEY

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ABSTRACT

This paper is an attempt to evaluate the knowledge composition in the field of Virtual Communication which is a must to go for in the new normal with the support of an in-depth bibliometric and network analysis. Findings are drawn from a total of 590 research articles on virtual communication published in research journals and conference proceedings listed in Scopus, spanning over last 38 years from 1983 to 2021. Articles written in English were considered for the current study. This bibliometric assessment provides a diverse perspective by depicting the landscape and developmental path of the research carried out in the field of virtual communication over the time. Analysis is done basis multiple bibliometric parameters with the use of various network analyses and data analysis techniques. Findings of the study reveals the rising number of publications in the virtual communication research domain, where 2021 has witnessed highest amount of publication till date. United States is surfaced as the leading nation followed by United Kingdom and Japan in terms of number of publications in the said field. Further bibliometric findings lay a strong foundation for the in-depth review of literature and empirical study. This marks the scope for future research.

Keywords: *Virtual communication, electronic communication, Bibliometric analysis, Network analysis.*

1. Introduction& Review of Literature -

1.1 Introduction to Virtual Communication

The Internet has introduced previously unknown modes of communication and new languages into our lives. One of such modes of communication is the virtual communication (Morozova & Rozhnenko, 2021). Man has communicated since the first signs of human life. From simple exchange processes to speaking through the use of symbols and written communication (Colin, 1966). Communication is now a fundamental process for companies and a very important Dimension of virtual team work (Purdy et al., 2000). Considering the business scenario during and post COVID-19, it has laid compulsion on many businesses to operate on virtual platform. This has increased reliance on virtual communication for the smooth functioning of virtual teams (Morrison Smith & Ruiz, 2020).

1.2 Literature Review

As correctly stated by (Mitchell & Zigurs, 2009), virtual communication is a mode of communication that includes the use of technology- audio and video to communicate with people who aren't physically present in front of us. Even though virtual communication started way back with the discovery of telephone, the arrival of webcams, video conferencing and instant messaging, made virtual communication a big success (Shukla, 2012).

With the outbreak of the corona virus curse, face-to- face business communication has been wiped out for the time being. In-person meetings were fast replaced with virtual communication tools (Anderson et al., 2007).

Empirical study conducted by Weigand et al.,(2003) highlighted the advantages of virtual communication over traditional mode of communication. Apart from been quickly, virtual communication is also cost effective. Organizations can save on, spending on travelling expenses merely by initiating a video call (Kresimir et al., 2006). In a proficient environment, virtual communication saves a lot of time and funds. By using any instant messaging apps or web conferencing tool, we can exchange any information across the globe in seconds. It's a rescuer in case of a disaster (Shawn et al., 2015). Most of the texts we exchange with the aid of instant messaging application or internet conferencing device are encrypted, hence there is no fear of our messages being misused (Yi et al., 2006).

The largest challenge related to the use of virtual verbal exchange is that people's interpersonal abilities are diminishing (Ya-

Chun, 2014). To overcome the challenges of virtual communication, organizations have geared up by imparting required training to its manpower.

2. Research Methodology & Data Collection-

This research attempts to use bibliometrics to observe the research trends in the field of virtual communication in last 38 years (1983 - 2021). The rationale behind taking 1983 as a base year is, the first ever article on the study of virtual communication was published in 1983. (Broadus, 1987) defines it as "a quantitative study of physical publishing units or bibliographic units or their substitutes". The Scopus database retrieved 756 research articles, as; it is the largest peer-reviewed citation database in the fields of natural sciences, engineering, technology, medicine, social sciences, arts, and humanities, with more than 20,000 peer-reviewed academic journals (Chaudhari et al., 2019). The data was collected in September 2021 for bibliometric analysis. The data is collected by searching for "titles, abstracts, keywords" in the Scopus database by defining the corresponding search terms as Virtual communication, communication. Criteria for refining the search results were Articles and Conference papers published in English language only were considered.

3. Bibliometric Analysis

(Pritchard, 1969), invented the term bibliometrics. “Application of mathematics and statistical methodologies to literature and other forms of communication,” he explained. “The application of statistical analyses to investigate patterns of authorship, publication, and literature use” is another definition of bibliometrics (Lee et al., 2020). The cross-science of quantitative analysis of all knowledge bearers using mathematical and statistical methodologies is referred to as bibliometric analysis (Iftikhar et al., 2019). Bibliometrics is a comprehensive knowledge system that combines mathematics, statistics, and philology, with a focus on quantification (Garfield, 1987). The amount of literature (different publications, especially journal papers and citations) is the primary focus of bibliometrics (Moya-Anegón & Chinchill, 2007).

The Scopus database was used to find 590 research articles and conference papers, which were then analyzed. The data was analyzed in two sections: "bibliometric analysis" and "network analysis."

In bibliometric and network analysis, bibliometric indicators such as geographical analysis, citation counts, subject areas, most cited papers, most influential authors and co-occurrence of keywords are analyzed and presented in the form of graphs, charts, tables and network diagrams with the help of vosviewer and imapbuilder.

3.1 Analysis of yearly publication

590 Journal articles and conference papers were retrieved for the duration of 38 years (1983-2021). Trends for yearly publication for virtual communication are listed in fig 1 and fig 2. It can be seen that the first article on virtual communication was published in the year 1983. Between 1984 to 1989 there were no articles published on the said subject. From 1990 onwards there has been at least 1 research article published every year. From the year 2007, there has been a consistent rise in the number of articles amounting to 74 articles in the current year i.e. 2021.

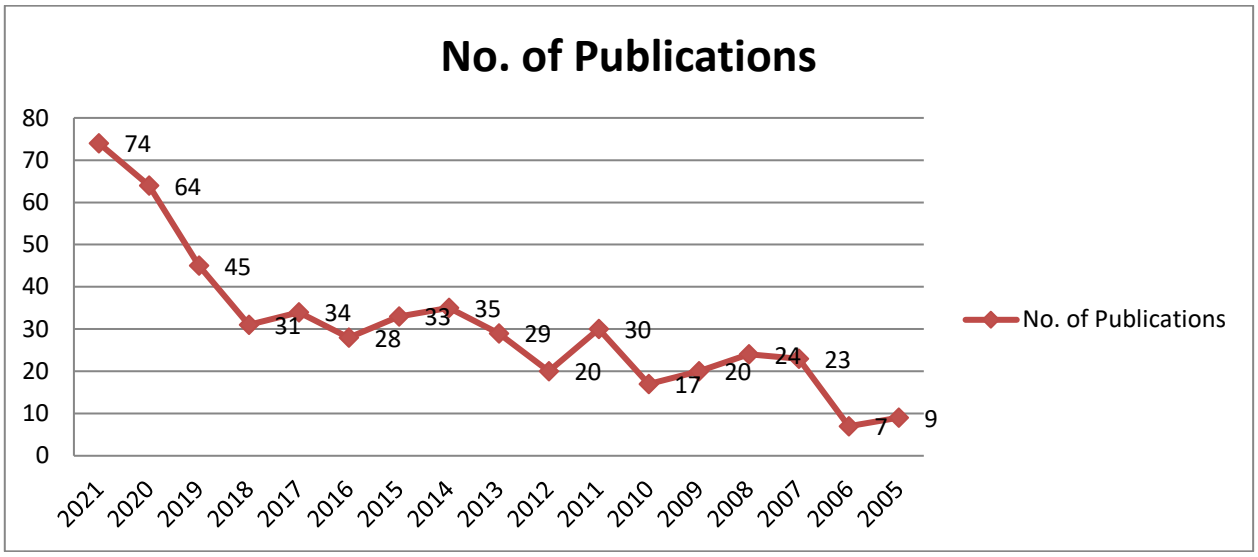

Figure 1: Annual publishing trend from 2005-2021 in virtual communication research
Source: http://www.scopus.com (fetched on 21st September 2021)

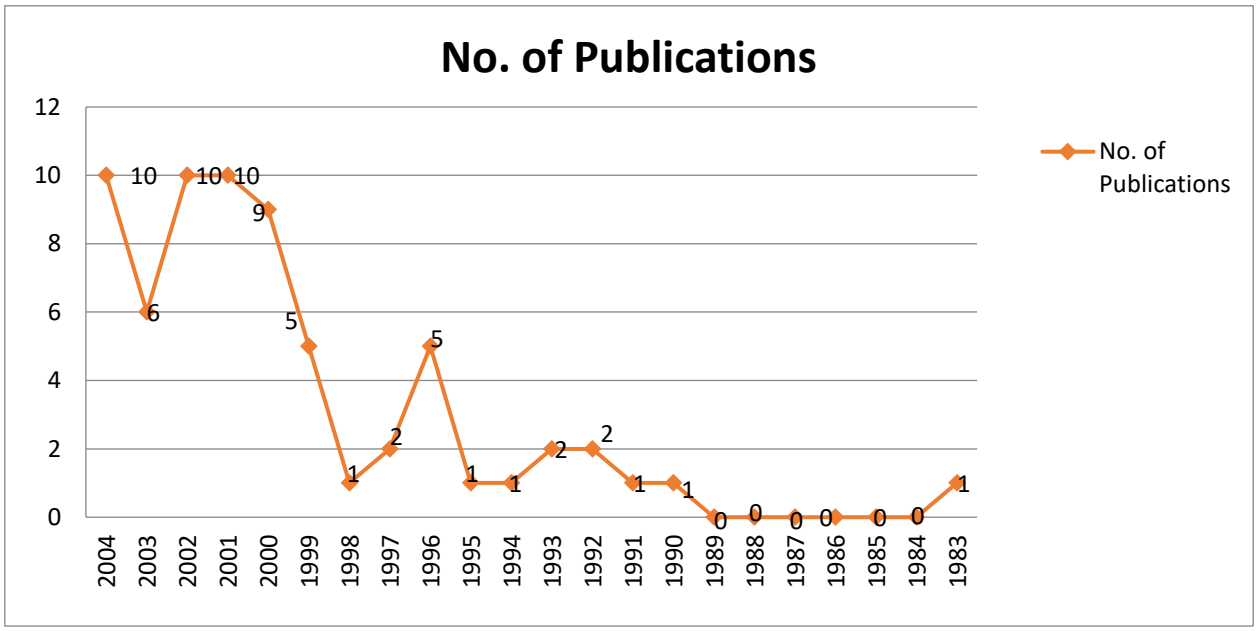

Figure 2: Annual publishing trend from 1983-2004 in virtual communication research
Source: http://www.scopus.com (fetched on 21st September 2021)

3.2 Analysis based on subject areas

Table 1 and fig 3 show a subject-by-subject examination of retrieved papers in the virtual communication study domain. It is clear that the most study is done in the fields computer science having 269 articles constituting 25.5% of the total publications followed by social sciences with 196 articles capturing 18.6% of the share and other fields sprawling behind.

Table 1: Distributions of documents published by top 10 subject areas

Subject Area	Documents (Articles & Reviews)
Computer Science	269
Social Sciences	196
Engineering	137
Business, Management and Accounting	73
Medicine	59
Mathematics	57

Arts and Humanities	54
Decision Sciences	42
Psychology	41
Environmental Science	27

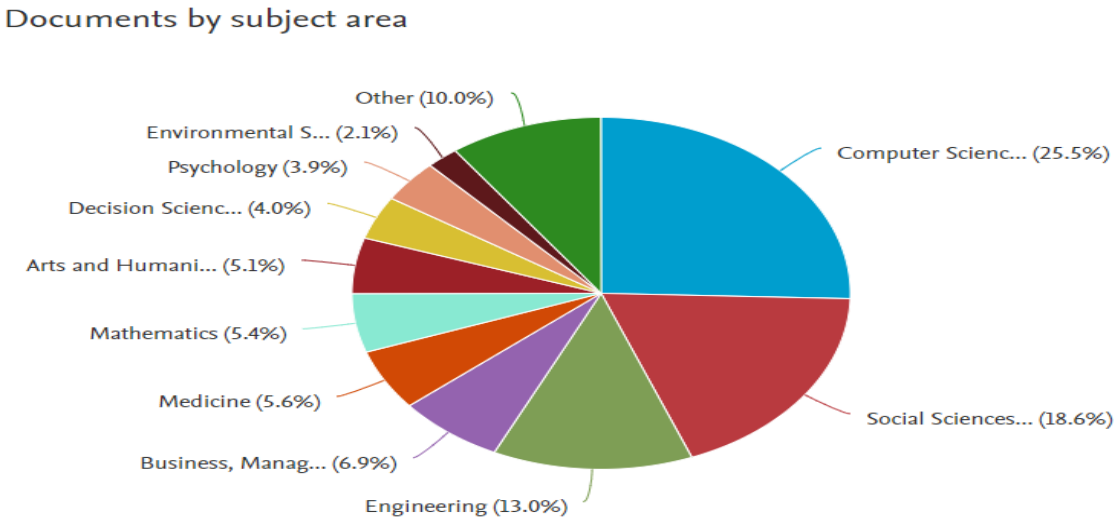

Figure 3: Subject area wise distribution of extracted literature
Source: http://www.scopus.com (fetched on 21st September 2021)

3.4 Analysis based on the author of documents (Author Influence)-

Fig 5 and Table 3 highlights the top ten authors who are contributing in related research. As outlined in the table, out of 590 articles and conference papers retrieved from Scopus, 54 articles and conference papers are written by these top 10 authors. Watanabe, T. dominates the research area with highest number of publications 16 articles altogether followed by Ishii, Y. having 6 articles published in the related field.

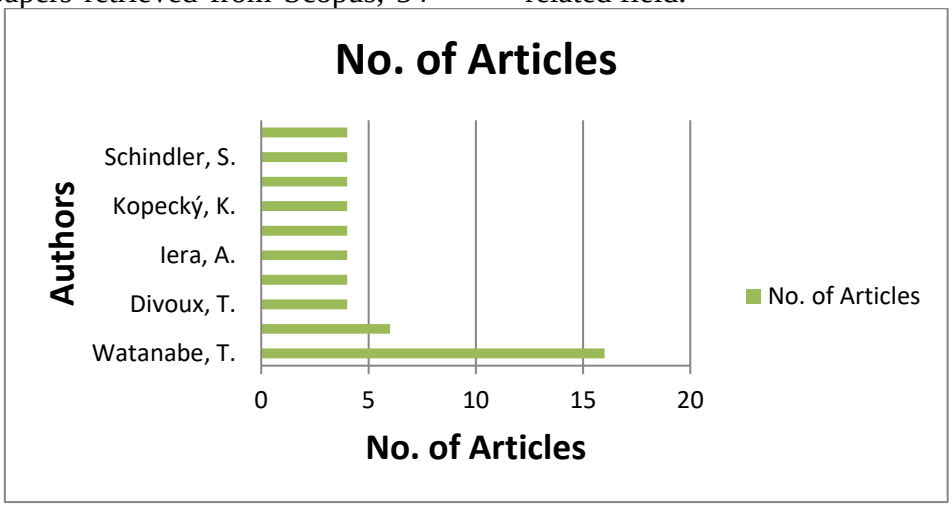

Figure 5: Key contributing authors in virtual communication related researches
Source: http://www.scopus.com (fetched on 21st September 2021)

Table 3: Top 10 highly contributing authors along with their number of publications

Name of Author	No of Articles
Watanabe, T.	16

Ishii, Y.	6
Divoux, T.	4
Farris, I.	4
Iera, A.	4
Kissler, J.	4
Kopecký, K.	4
Ohya, J.	4
Schindler, S.	4
Schwan, K.	4
Total Articles	**54**

3.5 Geographical regional analysis-

Fig 6 shows the distribution of published articles and conference papers based on geographical location. United States and United Kingdom are emerged as the most prolific countries in the virtual communication research.

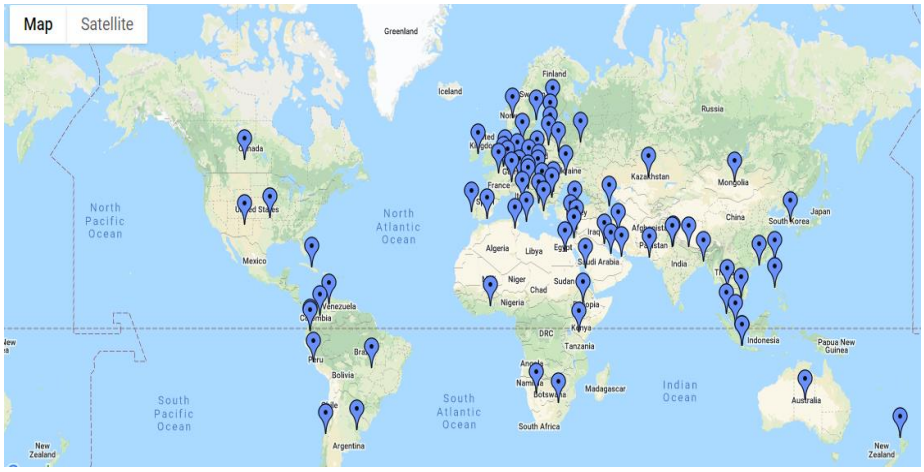

Figure 6: Geographical location of countries involved in the virtual communication research (data fetched from Scopus & map prepared with the help of Source-imapbuilder.com on 22nd September 2021)

Table 4: Top 10 countries contributing in virtual communication research domain

Country	No. of Documents
United States	145
United Kingdom	44
Japan	42
Germany	40
Russian Federation	34
China	31
Spain	26
Canada	21
Italy	19
India	18

Table 4 illustrates the top ten productive countries in virtual communication research publications. United States tops the list contributing 145 documents followed by United Kingdom and Japan contributing 44 and 42 documents respectively. India occupies

10th place with 18 documents contributed till date.

Citation Analysis

According to (Garfield E. , 1972), the academic worth of articles is determined by the number of citations they receive."Citation establishes a connection between authors that is proportional to the degree to which they communicate indirectly through the literature," (Shaw, 1979).

Table 5: 10 Most cited articles

Publication Year	Document Title	Authors	Total Citation
1991	An Adaptive and Fault Tolerant Wormhole Routing Strategy for k-ary n-cubes	Linder D.H., Harden J.C.	306
2013	Nomophobia: Dependency on virtual environments or social phobia?	King A.L.S., Valenca A.M., Silva A.C.O., Baczynski T., Carvalho M.R., Nardi A.E.	149
2013	When global virtual teams share knowledge: Media richness, cultural difference and language commonality	Klitmoller A., Lauring J.	121
2005	Geographies of knowledge formation in firms	Amin A., Cohendet P.	114
2003	Clarifying the instructor's role in online distance learning	Easton S.S.	111
2012	Framing the telephone interview as a participant-centred tool for qualitative research: A methodological discussion	Trier-Bieniek A.	99
2020	Impact of COVID-19 on routine care for chronic diseases: A global survey of views from healthcare professionals	Chudasama Y.V., Gillies C.L., Zaccardi F., Coles B., Davies M.J., Seidu S., Khunti K.	97
2001	SmartKom: Multimodal communication with a life-like character	Wahlster W., Reithinger N., Blocker A.	95
2008	Autistic culture online: Virtual communication and cultural expression on the spectrum	Davidson J.	92
2010	The spatial dimension of social capital	Rutten R., Westlund H., Boekema F.	84

Table 5 shows 10 most cited articles in virtual communication domain. Article titled "An Adaptive and Fault Tolerant Wormhole Routing Strategy for k-ary n-cubes" authored by Linder D.H., and Harden J.C. published in the year 1991 has got 306 citations which is the highest number. As per the data accessed in Scopus on 21st September 2021, the total number of citations of 590 publications is 4895 to date.

Network Analysis

The network analysis method is used to show the graphical relationship between the study's numerous statistical parameters. For network analysis, there are a variety of software packages available, each with its own set of advantages and disadvantages (Fahiminia et al., 2015). Bibexcel, Gephi, Graphmaker, VOSviewer and Pajek are the most popular tools.VOSviewer is a tool for statistical analysis of text data and for creating and displaying visual analytics with its user-friendly environment (Van Eck & Waltman,

2010). In network analysis, author keyword co-occurrence map is constructed using the bibliographic database file retrieved from Scopus data base as an input.

4.1. Author keyword co-occurrence map-

The primary areas of research focus are identified by the author's keywords. The authors and author keywords were analyzed using VOSviewer software to create a co-occurrence network for keywords. The minimum number of co-occurrence of keywords was limited to 20, and full counting citation algorithm was followed for analysis purpose. It showed total of 1027 keywords for all 590 journal articles and conference papers. However, 84 keywords met the set threshold and further grouped in 6 clusters.

It is clear from Fig 7 that the most commonly used keywords are virtual communication, communication, virtual reality, communication systems, e-learning, interpersonal communication.

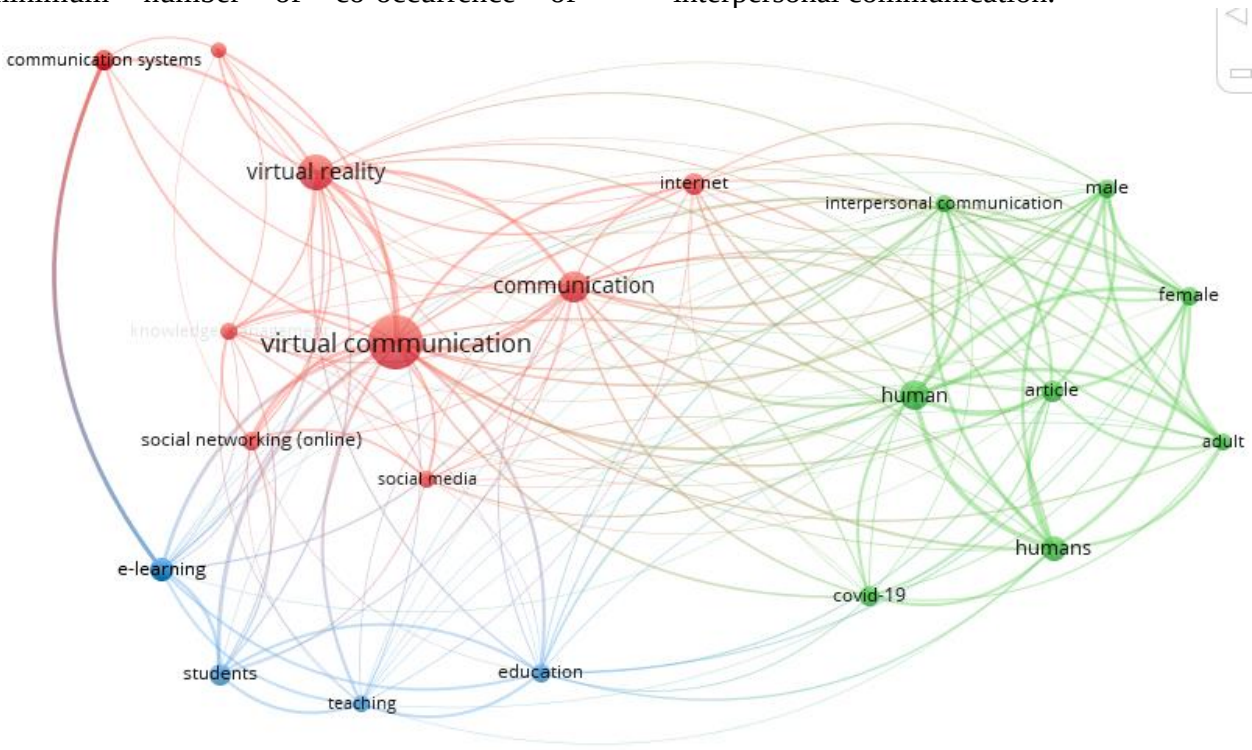

Figure 7: Visualization map for co-occurring keywords used in virtual communication related research.

Limitations of the Study

1. Present study used only Scopus repository for fetching relevant data on virtual communication. However, there are many other authentic data sources like Web of Science, Google scholar, and PubMed. Thus, future investigation needs to sufficiently cover these data sources to congregate more wide-ranging information and elude predisposition.

2.This study considers research articles and conference papers that have only been published in journals, and excludes other related literature in the form of books, book series, editorials, reviews and trade journals that might have been important.

Conclusion & Further Research Recommendations

This study is intended to analyse and report the bibliometric trends of virtual communication related research with the help of comprehensive set of journal articles conference papers retrieved from Scopus database spanning over 38 years from 1983 to 2021. It is concluded that 2021 has witnessed highest amount of publications till date (74 publications out of 590 publications). Countries like United States and United Kingdom followed by Japan are the leading countries in virtual communication related research. Computer science subject area has maximum articles (269 articles constituting 25.5% of the total publications) followed by

social sciences with 196 articles capturing 18.6% of the share. Research article titled "An Adaptive and Fault Tolerant Wormhole Routing Strategy for k-ary n-cubes" authored by Linder D.H., and Harden J.C. published in the year 1991 has got maximum citation (306 citations). Three most used keywords are virtual communication, communication, virtual reality, communication systems.

The endlessly growing number of publications explains the steadfast interest of researchers in the field of virtual communication but most of the research are concentrated in western countries like United Stated and United Kingdom. India holds 10th place. This shows there is a great need of more research to be carried out by Indian authors. Considering the dynamic business environment in new normal, further empirical research can be recommended to validate the applicability and effectiveness of virtual communication in global economy.

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WHY DO THEY (USERS) PREFER E-BOOKS?

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ABSTRACT

E-books are growing in academic world. The present study aims to find out the factors which motivated the users to prefer e-books and to find out the frequency of e-book reading among the respondents. Due to some features and advantages of e-books, the respondents preferred e-books such dictionary facility, bookmarking and highlighting features, facility of download, 24x7accessibility etc. However, the frequency of reading e-books is not commendable.

***Keywords**: E-books, Academic library, e-book use, preference for e-books.*

Introduction

Electronic books are the need of the time. Academic libraries have responsibility to grow e-book culture in academic community. Clay (2012) defined e-book as "a simple definition of an e-book is an electronic book. A book that is in a digital format that is read on an e-book reader or application" (p. 6). The e-books came into light in 1971 with Project Gutenberg. Academic libraries face various concerns while dealing with the different aspects of e-books. User's preference for e-books or print books is one of the major issues. The users prefer e-books as e-books have various features and advantages. E-books can be read on laptop, PC, E-reader and Mobile etc. Also there are different formats of e-books. However, PDF is the most popular. Awareness plays an important role in e-book access and usage. Young generation with tech savvy skill prefers e-books. Many times, the users aware about the e-books; however, they prefer print collection.

E-book provides the convenience and fastest updates to the users. The most of the users access e-books for their research and study. E-books are available to larger audience compare to print books. E-books are having features which are 24x7 accessibility, taking notes, saving and downloading, search ability, help the academic people to access it smoothly. E-book access may hamper due to digital right management and copyright laws. DRM restricts saving, printing, copying, pasting or downloading.

Objectives

The main two objectives of this study are:

1. To find out that how frequently users read e-books
2. To find out the motivating factors to prefer e-books

Review of Literature

Wilkin and Underwood (2015) highlighted e-books usage as a wicked problem. Whereas, Bhattacharjya (2017) remarked that"Users value the e-books because of its convenience and ease of access and so researchers are getting engaged in new forms of book content usage to take advantage of their library collection". Cumaoglu, Sacici, & Torun, (2013) found\ that the users had awareness about the e-books availability in their libraries. Bierman, Ortega, & Rupp-Serrano (2010) highlighted that the faculty members were low in use and awareness about the e-book. Cumaoglu, Sacici, & Torun, (2013) found that the users used e-books for their research assignments and self-study. The earlier studies showed the students are happy with e-books as they experienced the enhancement in learning (Kissinger, 2013). Ebied and Rahman (2015) highlighted motivating factor that "E-books provide freedom and flexibility to learners in learning according to their own abilities, time and learning pace." On the other hand, the 53% of the users preferred the printed books (Pledger, 2010) and the users have preferred printed books over the e-books (Woody et al., 2010). Ongoz and Baki, (2010) concluded that "It is becoming quite clear that, despite

the ubiquity of computers and interactive technology in their lives, students preferred textbooks over e-books for learning and this preference is not altered by familiarity with the medium". Due to easy to share facility motivated the students towards e-book use (Ongoz & Baki, 2010)

Methodology

1. Research design:

The researcher has considered the Mumbai region area for the present study. This study is a part of big research. The survey research method was used for the present study.

2. Population of the study:

The students of the MMS program affiliated to University of Mumbai, specifically who has taken Finance subject for their specialization are considered for the study.

3. Sampling:

The Convenient sampling technique was used.

4. Data Collection:

The researcher prepared questionnaire was distributed through Google form; however, the users were requested personally to fill Google form. The researcher tried to reach out and collected data. The proper 148 responses were recorded and taken for data analysis.

5. Method of Data Analysis:

The SPSS was used to analyze the collected data.

Data Analysis and Interpretation

The researcher analyzed the data with the help of SPSS.

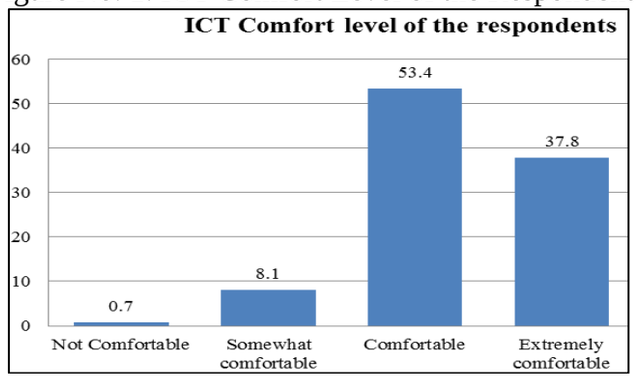
Table No. 1: Age Wise Distribution of the Respondents

Age wise distribution of the respondents		
	Frequency	**Percent (%)**
18-22 years	106	71.6
23-27 years	42	28.4
Total	**148**	**100**

Source: Primary Data

The users who responded to the research tool were the students in which the majority of the students (71.6%) were between the age range 18-22 years and 28.4% of the users were between the age range of 23-27 years.

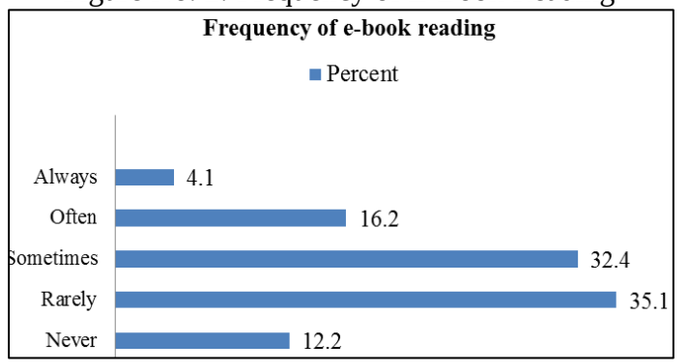
Figure No. 1: ICT Comfort Level of the Respondents



Source: Primary Data

The researcher found that the majority of the respondents (53.4%) were comfortable with the use of ICT equipment. About 37.8% of the respondents were extremely comfortable with the use of ICT equipment.

Figure No. 2: Frequency of E-Book Reading



Source: Primary Data

The researcher found that the most of the respondents (35.1%) read e-books rarely and about 32.4% of the respondents read e-books sometimes. About 4.1% of the respondents read e-books always and about 16.2% read e-books often.

Preference for e-books use: Motivating factors

There are various advantages and features which make e-book access very smooth and desirable. The researcher found the factors due to which the users preferred e-books.

Table No. 2: Online Availability - 24X7 Remote Accesses

Online availability - 24X7 remote access		
	Frequency	**Percent (%)**
Disagree	4	2.7
Neither Agree or Disagree	14	9.5
Agree	69	46.6
Strongly Agree	61	41.2
Total	**148**	**100.0**

Source: Primary Data

About 88% of the respondents preferred e-books as the e-books are available online 24x7.

Table No. 3: Faster and Easy Access to New Titles

Faster and easy access to new titles		
	Frequency	**Percent (%)**
Disagree	1	.7
Neither Agree or Disagree	12	8.1
Agree	78	52.7
Strongly Agree	57	38.5
Total	**148**	**100.0**

Source: Primary Data

The majority of the respondents (52%) agreed and about 38.5% of the respondents strongly agreed to the factor that the faster and easy access to new titles motivated them to prefer new e-books.

Table No. 4: Easy to search

Easy to search		
	Frequency	**Percent (%)**
Disagree	2	1.4
Neither Agree or Disagree	13	8.8
Agree	71	48.0
Strongly Agree	62	41.9
Total	**148**	**100.0**

Source: Primary Data

The majority of the respondents (48%) agreed and about 41.9% of the respondents strongly agreed to the factor that an easy to search facility motivated them to use new e-books.

Table No. 5: Offline E-Book Reader Facility

Offline e-book reader facility		
	Frequency	**Percent (%)**
Disagree	3	2.0
Neither Agree or Disagree	24	16.2
Agree	81	54.7
Strongly Agree	40	27.0
Total	**148**	**100.0**

Source: Primary Data

The researcher found that about 81.7% of the respondents preferred e-books as it provide the offline e-book reader facility.

Table No. 6: Convenience

Convenience		
	Frequency	**Percent (%)**
Strongly Disagree	1	.7
Disagree	3	2.0
Neither Agree or Disagree	15	10.1
Agree	76	51.4
Strongly Agree	53	35.8
Total	**148**	**100.0**

Source: Primary Data

The most of the respondents preferred e-books as e-books are convenient.

Table No. 7: User Friendly Features

User friendly features (Bookmark and Highlighting features of e-book		
	Frequency	**Percent (%)**
Disagree	3	2.0
Neither Agree or Disagree	21	14.2
Agree	78	52.7
Strongly Agree	46	31.1
Total	**148**	**100.0**

Source: Primary Data

User friendly features such as bookmark and highlighting features of e-books motivated 84% of the respondents towards e-books, however, 16% of the respondents did not agree about it.

Table No. 8: Recommended By Faculty Members

Recommended by faculty members		
	Frequency	**Percent (%)**
Strongly Disagree	1	.7
Disagree	11	7.4
Neither Agree or Disagree	35	23.6
Agree	69	46.6
Strongly Agree	32	21.6
Total	**148**	**100.0**

Source: Primary Data

When the users were asked about their motivation from the faculty; the most of the respondents (46.6%) agreed and about 21.6% strongly agreed that they preferred e-book when faculty members recommended them. While about 23.6 % of the respondents were neutral about it.

Table No. 9: Recommended By Librarians

Recommended by librarians		
	Frequency	**Percent (%)**
Strongly Disagree	1	.7
Disagree	13	8.8
Neither Agree or Disagree	29	19.6
Agree	80	54.1
Strongly Agree	25	16.9
Total	**148**	**100.0**

Source: Primary Data

The researcher found that majority of the students (71%) preferred e-books when the librarians recommended them. About 19.6% of the respondents were neutral about it.

Table No. 10: Simultaneous Use

Simultaneous Use		
	Frequency	**Percent (%)**
Strongly Disagree	2	1.4
Disagree	4	2.7
Neither Agree or Disagree	34	23.0
Agree	77	52.0
Strongly Agree	31	20.9
Total	**148**	**100.0**

Source: Primary Data

The researcher found that the majority of the respondents preferred e-books because e-books provide the simultaneous use.

Table No.11: Updating and Accessing E-Books Faster Than Printed Books

Updating and accessing e-books faster than printed books		
	Frequency	**Percent (%)**
Strongly Disagree	3	2.0
Disagree	4	2.7
Neither Agree or Disagree	19	12.8
Agree	73	49.3
Strongly Agree	49	33.1
Total	**148**	**100.0**

Source: Primary Data

The e-books can update or reprint new editions faster than printed books. About 49.3% of the respondents agreed and 33.1 % strongly agreed that this feature of e-books motivated them towards the e-books as it provides fast access.

Table No.12: Dictionary Facility

Dictionary facility		
	Frequency	**Percent (%)**
Strongly Disagree	1	.7
Disagree	2	1.4
Neither Agree or Disagree	40	27.0
Agree	67	45.3
Strongly Agree	38	25.7
Total	**148**	**100.0**

Source: Primary Data

The dictionary helps the readers of e-books to use e-books smoothly. About71% of the respondents preferred e-books as e-books have dictionary facility.

Table No. 13: Facility to Download

Facility to download		
	Frequency	**Percent (%)**
Disagree	6	4.1
Neither Agree or Disagree	25	16.9
Agree	75	50.7
Strongly Agree	42	28.4
Total	**148**	**100.0**

Source: Primary Data

About 28.4% of the respondents strongly agreed and 50.7% of the respondents agreed that e-books can be

downloaded on their device; whereas, about 17% of the respondents were unsure and about 4.1 %of the respondents disagreed.

Table No. 14: Good for Leisure Reading

Good for leisure reading		
	Frequency	**Percent (%)**
Strongly Disagree	2	1.4
Disagree	5	3.4
Neither Agree or Disagree	35	23.6
Agree	72	48.6
Strongly Agree	34	23.0
Total	**148**	**100.0**

Source: Primary Data

The most of the respondents (71.6%) preferred e-books for leisure reading, about 23.6% of the respondents were neutral about this.

Conclusions

The users preferred e-books due to various advantages of e-books such as online 24x7 accessibility, fast accessibility to new titles, dictionary facility, simultaneous access and use. Facility to download provides the freedom to save the e-books on their devices. The students also preferred e-books for leisure reading. However, the frequency of e-book reading is quite low. The libraries should take some measures to implement the e-book culture in academic community as the students are comfortable with the ICT and its equipment.

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