DECODING CHINA'S MASTER PLAN

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ABSTRACT

If we Indians keep appeasing China because of our addiction to trade with them and overlook everything else for our benefit then, Indians have a chance of repeating history. Just the way in the late 1930s, the British government led by Chamberlin kept appeasing Hitler and giving into its demands, it eventually led to the Second World War. If Indians continue on the same path then, we might either be leading the world to a Third World War or a World dominated and colonized by China. If this be the case then we, the citizens of the World should use our wallet judiciously and hit China where it hurts most, the Economy i.e., defeat China not through war but by not being a victim of their economic progress. If the entire world decides not to sponsor this regime then that will see the China's worst nightmare coming true. China wants to emerge out victorious and make a mark which highlights them forever. In this unfortunate scenario, India should support our Hon. Prime Minister Shri. Narendra Modi by becoming self-subsistent and curb out China from our economy. This paper basically is an attempt of self-awareness as well as an action put forward to become self-reliant.

Keywords: *Boycott Chinese Products, China's Masterplan, Economy, Indo-China conflict, Covid-19.*

Introduction:

The Economy of India currently is what is going to destroy us and not Covid-19 or nukes. A lot of questions have been arising now in our minds which earlier had been overlooked. In March 2020, the Indian navy had found 12 underwater drones in IOR coming all the way from Beijing. Presently, the entire world is fighting against the unfortunate Covid-19; in such a situation China is pushing its borders against Japan, Australia, Vietnam and even India. In the middle of this health crisis, China is becoming political. The Indo-China conflict has been existing since several years now as China openly claims Ladakh and Arunachal Pradesh to be its own territory. But, since the last couple of days, there have been several problems constantly occurring at our border. This is the worst time for India to go to war with China as the biggest weapon in this war shall be the Economy. The President of China Xi Jinping has publicly told its military to start preparing for war.

Aims & Objectives:

1. To understand the severity of the Economy of India currently due to the COVID-19.
2. To understand China's Masterplan.
3. To understand the strategy to make India Self-reliant.

Research Methodology:

For this research paper, the information has been collected using secondary sources including newspaper, articles, websites and magazines available online. Also, a survey had been conducted with 700 individuals. The analysis presented is solely based on the references mentioned for this paper.

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Data Interpretation/ Analysis: -

1. **Ground realities -** Trade figures suggest that India is the biggest importer of Chinese consumer goods. India imports approximately seven times more from China than it exports to it. India has a huge trade deficit with China – its largest with any country. In the year 2018-19, India's exports to China were mere $16.7 billion, while imports were $70.3 billion, leaving a trade deficit of $53.6 billion. The range of goods that we import from China is quite massive; consumer durables such as electronic goods, smartphones, industrial goods, vehicles, solar cells, and essential pharmaceutical products including tuberculosis and leprosy drugs and antibiotics, among many others.

2. **Quality goods is compromised: -** In 1949, Chinese communists took control of China. Since the 1980s, Chinese leaders have made economic development as one of their first priorities. Chinese businesses quite often produce goods tailored to market expectations; therefore, Chinese products may not be high in quality when consumers prefer to pay a low price. Overpopulation in China is a possible reason for manufacturing low-quality products. Some firms cannot find enough of the needed raw materials to produce goods that serve the customer requirements, producing instead various versions made with cheaper or low-quality material. At this point in time, many companies and businesses might also lack capital, industry expertise, and marketing power, leading to counterfeit products. Many unethical companies produced hoax goods to earn more benefits. At times, products of famous corporations like Apple, Hyatt and Starbucks are copied.

3. **Human Rights Violation: -** Human Rights Violations have spurred support for the movement, forced/arranged marriage, the massacre of Tiananmen Square in 1989, single child policy, Falun Gong organ harvesting, the invasion of Tibet, Child workers, abusive working conditions throughout China's production processes, abuse in re-education camps and the escalating and ongoing conflict and military presence in Hong Kong in which Human Rights violations are being broken e.g. the right to peacefully protest, police brutality (kidnapping and associated organ harvesting then execution, excessive force, attempted vehicular homicide, etc.

4. **Overstating of its bills: -** Hydroxychloroquine is a drug used to cure Malaria and research shows that it can prove to be useful against Covid-19 as well. India is the largest manufactures of this drug and we recently exported 50 million pills to the US. But the raw material for this drug comes from China and during this pandemic, China suddenly raised it prices. China is playing smart by improving its Economy by undertaking such horrendous steps. Efforts by an Indian agency to procure rapid antibody coronavirus test kits from China have come to naught, with the Indian government deciding to withdraw the "faulty" test kits from use and cancelling all procurement orders. The controversy around the efficacy and pricing of the rapid tests is set to change the way India now tests for the novel Coronavirus.

5. **Debt Diplomacy: -** Asia and Africa have a lot of countries that require financial help. But to take a loan from the IMF or World Bank, the country needs to meet certain strict criteria. In such a scenario, China is helping them. China is building a highway in Pakistan, it is funding a port named Hambantota Port in Sri Lanka and many other projects in countries like Myanmar, Maldives and even Nepal. The problem that arises is that these countries may not be able to pay China back and that's where China's Debt Diplomacy begins. Pakistan owes

more money to China than any other financial institution in the world. Recently, Pakistan unearthed a scam of $630 million regarding two Chinese companies that supplied power to China Pakistan Economic Corridor. It takes time for a country to repay the money borrowed as with passing time the loan piles on hence the interest also increases. This is when China comes into action and states that they should have complete power over that area so that they can operate the way they want to. This is how the Chinese population increases in that area or country. In case of war, China can easily convert these trade bases into military bases.

6. **Strategic Investments in countries to surround India: -** Djibouti is a small African country and China practically owns it as it has created a military set up there. Like-wise it has invested in other countries as well like Myanmar, Bangladesh, Sri Lanka, Maldives, Pakistan, Africa, Cambodia, Hong Kong, etc., which surround India from all possible areas hence becomes easy for them to activate these areas for an attack in India at anytime. This is China's 'String of Pearls' using the Economy to surround India and stay prepared. In case of war, chances are that the attack won't be from one side but from multiple sides.

Analysis of the Survey:

1. A sample survey had been conducted where we collected approx. 700 responses. This survey had been conducted during the mid-May. Sample profile is as follows:

- 53% of the responders were male whereas 47% of them were females

- 49% of them were students, 37% of them belonged from the working-class sector, 14% others.

- 54% of the responders were under the age of 30, 39% were under the age of 60 and the rest 7% were above the age of 60.

2. We asked the responders whether they shall be using Made in China products after being aware of the China's masterplan as well as their scams.

Made in China

Will you use Chinese products?

13%
35%
52%

- No
- Neutral
- Yes
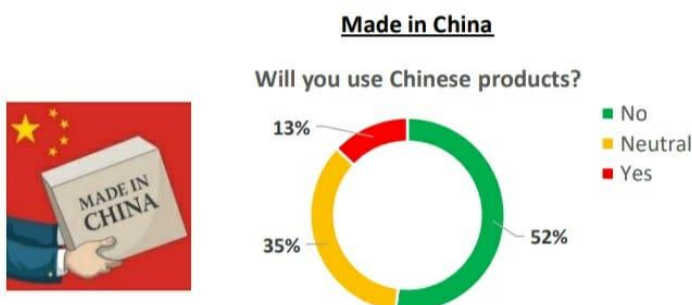
Observations and Suggestions: -

- India is depended upon China because it receives majority of its raw materials as well as finished goods from China as it is the cheapest available there. Indians need to find an alternative for maximum products which we receive from China like toys, gadgets, electronics, consumer able items, etc.

- Indians need to be self-reliant enough and need to start incorporating Made in India products and goods in their day to day life so that we are not depended upon China made goods. Though being a little slight expensive than the Chinese products, we should not stop ourselves from buying Made in India products as the quality of China made goods are usually compromised unlike most Made in India goods.

- In the last 2 months, a new industry worth Rs. 10,000 crores is born in India. The textile industry had to close down due to the Covid-19. But, even during these tough times, Indians found an opportunity. Rather than shutting down factories, they started making PPE kits. One private company had started it, then many joined and today India makes 450,000 kits per day. In these 2 months, India has now become the world's second largest supplier of PPE kits. This new industry shall be worth $60,000,000,000 by 2025. All of this happened in less than 60 days.

- The Mahua flower from Chhattisgarh is used to make local liquor. The tribal women in Chhattisgarh used this flower to make alcohol which is the base product used in hand sanitizers when India was scrambling to get enough supply of hand sanitizers. A tribal solution saved lives.

- "India looks to lure more than 1000 American companies out of China"- *The Economic Times*. Around 300 companies have already given their confirmation on paper. These companies will not manufacture in big metropolitan cities but in small cities, in the interiors. Luxembourg is a country in Europe, India offers land twice Luxembourg's size to firms leaving China and settling in India.

- India has a long way to go and Indians cannot boycott China in one day. It is a fact that we don't have electricity, infrastructure and even skilled labour for that matter. But it is also a fact that we have a lot of untapped potential.

- In 2014, India had only 2 mobile manufacturing units. Today, we have 268 factories including Samsung's largest factory in the world. This is the best time for India to work on its negatives and take a step forward in becoming self-reliant or else it shall lose a big opportunity towards making a mark of success.

Conclusion: -

China is using Economy to boost its politics and military. China has created a situation for India where Indians cannot afford a war because, in case of a conflict in the future, then tackling it only by force is not an option for India anymore. Because with the money power, China has its allies all around us. So if we cannot use 'Bullet force' then let's use 'Wallet force' rightly said by Mr. Sonam Wangchuk (China's People's Liberation Army, Indian engineer, educator and innovator). If Economy is a weapon, then Indians itself are its distributors. Indians have to boycott Chinese products. Mr. Sonam Wangchuk stated that Indians should remove Chinese software from their phones in a week and Chinese hardware in a year. 8/10 items in an Indian's house is made in China; if so then throwing them away makes no sense. This is an unrealistic and foolish expectation. Instead, while purchasing something from the next time, make sure to check whether there is a local alternative

available. If each citizen actually starts implementing on this then, in a span of 5 years' time, Indians shall be depended on China only for a few essential products. India is not in the China's Debt Diplomacy trap yet unlike countries like Pakistan, Sri Lanka and Bangladesh. Its yet not too late to make a change and implement on the necessity. In this Covid-19 situation, our government has realised how dangerous China could be hence, India notifies FDI policy change mandating prior nod for border sharing countries. This is done so that in this crisis, no Indian company becomes a Chinese puppet. Great historical progress always happens after major disasters. This is the time when India has to prove itself to its countrymen as well as the world. Whenever the country hits rock bottom, it is the people of that country who bring the light back to life.

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TO STUDY THE AWARENESS AND ADOPTION OF VIRTUAL INTERNSHIP IN MUMBAI

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ABSTRACT

With the rise in the digital technology, Virtual Internship have become an important system to bridge the gap between students, companies and academics especially in this lockdown period caused due to COVID-19 pandemic attack affected all over the world. Virtual internship is a platform where the participants also called interns are allowed to gain work experiences and explore to various opportunity to acquire professional skill by working on project online. It's an attempt to create a connection between industry and academic during the learning process of students. It also aims to promote globalization and help the students and employees worldwide to easily access each other. The purpose of this paper is to discuss the emergence of adoption of this virtual internship, its motivational factor and possible pitfalls that may be faced. It also focuses on awareness and adoption of virtual internship among the students in this era.

Keywords: Digital technology, Virtual Internship, COVID-19, students

INTRODUCTION

As the job market has become more competitive in today economic situation due to COVID 19, attending virtual internships is more important than ever, as they help students to take the first steps in their career and explore themselves in a challenging economic environment. Unlike the conventional internship, students called interns in virtual internships work remotely from a location of their choosing, communicating with professionals through E-Commerce. It provides various opportunities to the students to develop both technical and soft skills. As the popularity of online education continues to increase, both universities and employers have turned to technology to look for more effective and modern means of improving the internship process by way of virtual Internships.

VIRTUAL INTERNSHIP

Due to technological upgradation it's no surprise to hear that many employees are working remotely from home instead of the office. A virtual internship is just like that. These internships allow participants or interns, to gains experience while working in a remote professional setting and is not physically present at the job location.

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Generally, virtual internships are taken by students and graduates to help them gain and develop their skills in the career sector they want to pursue. It's consider as a great opportunity to explore an industry or role that you might not be 100% committed to yet or aware about. It allows them to get the first-hand experience with companies or a global scale while working from the comfort of their desired location.

A rise has been reported in virtual internships in lockdown period all over India due to COVID-19 pandemic attack. The most common virtual internships are available in the stream such as software development, information technology, social media, marketing, research, journalism, writing, media, video creation and editing, pre- and post-event planning, human resources, search engine optimization and marketing, graphic design, political internships, non-profits and government internships, public relations internships, engineering internships and many more.

Virtual internship represents as a great opportunity for students as well as employers.

BENEFITS FOR EMPLOYERS

❖ Completion of designated projects or "deliverables" for employer

❖ stimulate the Interest in a particular company or industry among future generations of employees

❖ Enlargement of a potential candidates from qualified applicants.

❖ Space and equipment saving.

❖ Eliminate the number of unproductive employees and paid hours of work

❖ Improvement in corporate image

❖ An opportunity to collect new outlook and project from interns regarding organizational branding, procedure and more

BENEFITS FOR STUDENTS

❖ Convenience

❖ Valuable professional experience

❖ Global exposure

❖ Opportunity to work in Virtual manner which offers flexibility

❖ Gain experience and can understand how their chosen field work

❖ Networking with professional people

❖ Learning opportunities

❖ Certificate of experience

❖ Monetary rewards

CHALLENGES OF VIRTUAL INTERNSHIP

Depending on your stream of study or the type of career students hope to establish, a virtual internship might not be a good fit. In the humanities and social sciences. for example, interacting face-to-face is often a defining feature of the job which may not be possible in Virtual Internship. While not universally true, many customer oriented skills can be difficult to build up if you spend most of your time communicating with others through E-commerce such as email or video chat resulting into communication problems ad misunderstanding.

Similarly, working remotely can be challenging if and when you need assistance with a project. In traditional way of interns are surrounded by professionals who can provide guidance and support at a moment's notice which may not be possible resulting into difficulty level in transferring knowledge via virtual. At a same

time, virtual interns would likely to miss out on gaining first-hand experience with the pace and environment of a company or organization. Lack of social interaction, Lack of physical access (internet, equipment, etc.) and different time zones may also result into challenging.

Finally, these positions require considerable organizational skills and the ability to self-motivate. A person who is not comfortable working self-sufficiently, or who just prefers working under direct supervision or group in that case such type of virtual internship might not be beneficial and it may possibly be counter-productive. However, this aspect can also work in your favor if one of your objectives is to develop the skills necessary to work independently. As compare to the formal employees the expectation of an intern will be somewhat less, which can allow for the space to make mistakes and build the skills to self-direct within moderation.

NEED FOR THE STUDY

Doing internships is no longer an option but a necessity for college students. A large number of universities and colleges across India have made internships a part of their curriculum resulting into providing more opportunities for the students to develop their soft skills and gain experience. However, the internship scenario in India is highly inclined towards that of traditional internship options. College students in India were unwilling to accept the idea of virtual internships. But, if considered at a global level virtual internships have gained a lot of popularity. A probability to work with international company and gain global exposure is an attractive opportunity for many students to set their career. Also due to COVID-19 pandemic attack which resulted into lock down all over India currently Virtual Internships gained a lot encouragement among college students.

OBJECTIVES OF THE STUDY

1. To understand the concept of virtual Internship

2. To study the motivational factors and challenges in Virtual Internship.

3. To understand the awareness level of virtual internship among the students.

4. To evaluate the adoption of Virtual internship among the students.

REVIEW OF LITERATURE

(Vriens, Mariet & Op de Beeck, Ilse & Gruyter, Johannes & Petegem, Wim, 2010) in their paper "Virtual Placements: improving the international work experience of students." Described about the global exposure provided to students through virtual internship as compared to the movement of students through traditional form of physical mobility. Virtual Internship prove to be more beneficial. The paper also explained the various opportunities and challenges in implementation of Virtual Internship.

(Hasan Ali, Ahsan M. Sayad, 2013) in their research paper "Increasing Virtual Education Effectiveness by Quantifying Student Learning Trajectories and Virtual Internships" have explained about the importance of virtual internship in development of a student learning. It helps to formulate and understand practices to be inculcated by teachers and institution for promotion of virtual University programs.

(Cortesao, Marta & Alessandro, Elia & Medeiros, Ana, 2015) in their research paper "Using Virtual Internships as an innovative learning technique" have discussed about the importance of Virtual Internship for students. It also describes as a new learning form in

European Engineering Education (EEE), Board of European Students of Technology (BEST) and the role they play in development of Virtual internships in Europe.

SIGNIFICANCE OF THE STUDY

The study will result to be of a great help to the employer of various company in the Mumbai city. The result of the study will reveal the importance, awareness level and adoption of Virtual internship amongst the student, colleges and various academic institution in Mumbai.

RESEARCH METHODOLOGY

The study aimed to know the awareness and adoption level of students of Mumbai city and hence the research design of the study is descriptive in nature.

DATA COLLECTION

The first hand data are collected directly from the respondents with the help of questionnaire as an instrument for the study. The secondary data were collected from sources such as various journals, research papers, newsletters and websites.

Population: Students of Mumbai city.

Sampling Technique: The researchers have used convenience sampling and selected 97 respondents from Mumbai city.

RESEARCH LIMITATIONS

Mumbai is one of the most significant city of the country and lakhs of student's study in Mumbai. The study limits to 97 samples selected from the city, however it cannot be considered as a complete representation of Mumbai.

However, the objective of the survey was to verify the student's awareness and adoption of Virtual Internship with regards to digital upgradation.

DATA ANALYSIS AND INTERPRETATION

Are you aware about Virtual Internship?
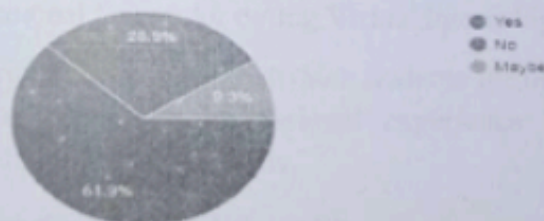97 responses

- Yes
- No
- Maybe

Chart 1.1 Awareness about Virtual internship among students.

The above chart depicts that 61.9% of the sample are aware about the virtual internship while 28.9% are completely unaware about it.

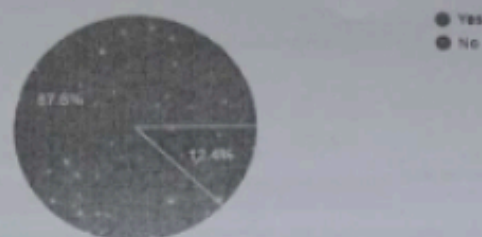Are you currently doing any Virtual Internship?
97 responses

- Yes
- No

87.6%
12.4%

Chart 1.2 Adoption of virtual Internship among students

The above chart depicts that 12.4% of the sample are doing virtual internship while 87.6% are hesitant in adopting it.

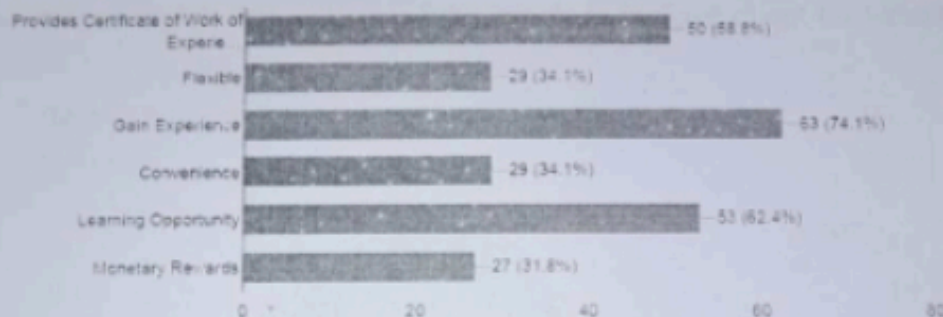What motivates you to opt for virtual internship ?
85 responses

Provides Certificate of Work of Experie...	50 (58.8%)
Flexible	29 (34.1%)
Gain Experience	63 (74.1%)
Convenience	29 (34.1%)
Learning Opportunity	53 (62.4%)
Monetary Rewards	27 (31.8%)

Chart 1.3 Motivational factors for opting Virtual internship

The above chart represents various factors that motivates students for opting virtual internship whereby the maximum weightage is driven by professional experience followed by learning opportunities, certification, flexibility and monetary rewards.

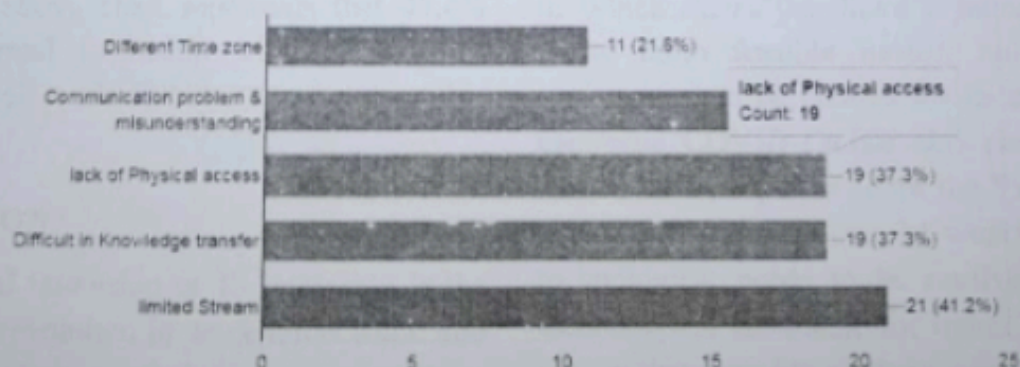If no, what are the reasons for not doing any Virtual Internship?
51 responses

Different Time zone	11 (21.6%)
Communication problem & misunderstanding	lack of Physical access Count: 19
lack of Physical access	19 (37.3%)
Difficult in Knowledge transfer	19 (37.3%)
limited Stream	21 (41.2%)

Chart 1.4 Challenges in Virtual Internship

The above chart depicts that the major reasons for unadapting of Virtual Internship are lack of limited field, inadequate knowledge transfer, difficulties in communication leading to misunderstanding and inappropriate time zone.

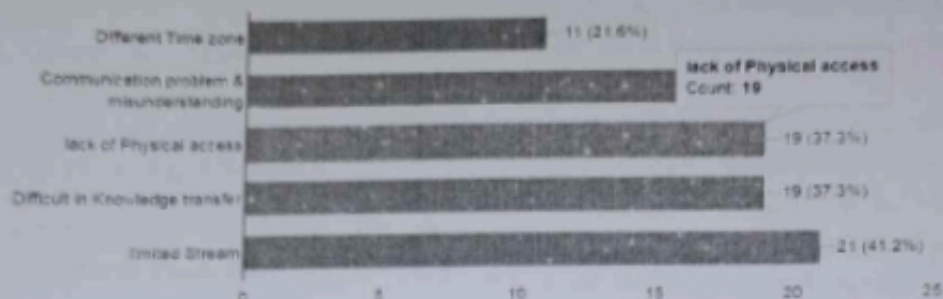If no. what are the reasons for not doing any Virtual Internship?
51 responses

Chart 1.5 Future preference of students for Virtual Internship

The above chart depicts that majority of the sample in inclined to opt for virtual internship in future.

Does your college placement cell provide any Virtual Internship?
97 responses

Chart 1.6 Adoption of virtual internship among colleges.

The above chart represents that 47.4% provides virtual internship with the help of placements cell while 52.6% are yet to adopt this mechanism.
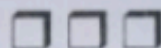
CONCLUSION

Virtual internship or E- internship is the new form of revolution in work force. More and more students are getting aware to these phenomena. However, only 12.8% have adopted it. Which shows that there is immense need to create more feasible means, more favorable environment to be created for its adoption. The pandemic COVID-19 has also created shift in mind set of people to adopt the Virtual form in place of traditional form of working. However technological needs to be resolved to make a technological advantage for India. The data also proves that majority of them would prefer to do virtual internship in future changing and boosting Indian landscape of "Digital India".

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Students Perspective of Mobile learning in Higher Education

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Abstract:

Education creates ample opportunity and paves the path to success. The present condition wants everyone to be a continuous learner, have technological skills and communication skills. Advance in technology in all areas has brought changes in the education system. Learners are now able to increase their knowledge and skillsets by opting for courses taught by the renowned professors of the prestigious universities. As an enhancement of skill is expected,the standard for better grades, better job opportunities, makes more and more people opting for online courses as it can be accessed anytime anywhere. There are many apps with which one can enhance his knowledge. People in remote areas can not only access the online classes but they can overcome the problem of lack of educational resources. To access these materials, they need a laptop, desktop, or a simple handheld device like mobile. Internet is available everywhere and mobile has multiple features and is essential for everyone This paper analyses the purpose of students using mobile phones, the number of hours they are spending to access the educational information, and the effect of it on their performance level.

Keywords: Education, Mobile technology, online courses, APPs

Introduction:

 The main purpose of education is to facilitate learning. The advancement in technology enables learning can happen anytime, anywhere. Education via digital platforms making its path into our education system. Presently there is lot of online educational portals providing educational

facilities in almost all subjects, catering to the needs of students of all level from schools, colleges to working professionals.These platforms can take learning resources, instructional materials such as videos, notes, examination preparation material, examination into the vicinity of learners wherever he is using digital technology. Thus, learners across the globe and any age group can acquire the knowledge and skills they want. Learners living in remote areas and cannot attend proper educational Institutions can opt for online learning platform. Government e-e-pathshala enables students, parents, educators to access resources (textbooks, audio, video) via any digital device. In India Tata Interactive Systems, Educomp Solutions, NIIT etc. are providing innovative and cost-effective digital learning solutions. People from the rural areas who are deprived of world-class education can enroll in these online courses for free or for a nominal fee which is affordable to many. They can connect to these courses through their computer, laptop, iPad, mobiles. Of these mobiles is commonly owned by everyone. Nearly all students nowadays own mobile devices and more than half own more than one.People can access these courses through their mobile connected to the internet. So, the future of learning is mobile. It can be used to deliver important instructions, to deliver lectures. M-learning is a new and independent part of e-learning where the education contents, delivery instructions, notices are handled solely by mobile devices. The online and technology-driven education is playing an important role in evading the challenges of classroom-based education with the 3'A's Accessible, Anywhere, Anytime. Apart from students, working professionals and others who want to learn can increase their skill set by opting for courses taught by renowned Professors from the top Universities of the world. Usage of mobile in learning in addition to other activity provides flexibility in learning and as it is used by many it will become a trend to use it in learning, considering the advancement of technology andits integration into the society and circumstances are changing. Learner can use mobile devices not only to access educational information from various resources, they can create contents by themselves; share these resources to others both within the classroom environment and outside also. The use of mobile technologies can help teaching faculties to adopt a learner-centered approach to learning. Learning can result in different ways: learners can use mobile devices to access educational materials from various links, creates their own content, connect with others to share the resources, both within and outside the classroom infrastructure. Educational materials can be shared among everyone by using the same content, which leads to instant feedback and

instructions. Most of the students, researchers, and educators view M- learning as the immediate successor of eLearning.

Review of Literature:

Several studies have been conducted in an attempt to find the growing use of mobiles in learning. Cheung and Hew (2009) reviewed 44 articles published until the end of 2008found that descriptive research was the most dominant method in studying mobile learning in schools and higher education where the data for studies is collected through questionnaires. Learning happening with the help of mobile devices is known as M-learning (Toteja& Kumar 2013). M-learning makes it possible for students to communicate, interact, and behave among each other with the aid of mobile devices (Al-Emran, Elsherif, and Shaalan2015). BlankaKlimova and Petra Poulova(2015) conducted a survey and found that the majority of students use mobile devices for learning for their studies to complete the missing information from their regular classes. Gikas& Grant (2013) found that mobilephones allowed students to access course materials andalso gave them the opportunity to share the contents, potentially contributing to bridging the gap between learning and real life.

Objective: To investigate whether mobile devices can improve the student'sgrades.

Hypothesis:

H_0: There is no association between gender and grade after using mobile devices for studies by learners.

H_1: There is an association between gender and grade after using mobile devices for studies by learners.

Methodology:

Survey method was used to collect the relevant data for the present data. A survey was taken from students of Mumbai Suburban colleges studying in Commerce, Social Sciences, Science and Technology, Medicine and Pharmacy branches. The data is also collected from various publications, articles, reports, and websites.

Tools: The researcher prepared a questionnaire based on the usage of Mobile Technology in learning. The questionnaire covered all the aspects of the study needed for the research. A survey

was taken from students of Mumbai Suburban colleges studying in Commerce, Social Sciences, Science and Technology, Medicine and Pharmacy branches. The purpose of the survey questionnaire is to study the student's awareness of M-learning.

Summary of the Survey:

A survey of 70 students was carried out in which they responded to the questions in the questionnaire out of this 44.3% are male and 55.7% are female students. Among this 40% of the students were 19 years of age. These students were studying in FY (11.4%), SY (44.3%), TY (27.1%), PG (17.1%) classes. 51.4% of students are from Commerce,11.4% of students from Science, 2.9% of from Social sciences, 8.6% of students from Technology and 25.7% of students from Pharmacy took part in the survey.

Profile	Classification	Number	Percentage
Gender	Male	31	44.3
	Female	39	55.7
Age group	18	9	12.9
	19	28	40
	20	17	24.3
	21	8	11.4
	22 And above	8	11.4
Class	FY	8	11.4
	SY	31	44.3
	TY	19	27.1
	PG	12	17.1
Stream	Technology	6	8.6
	Medicine & Pharmacy	18	25.7
	Science	8	11.4
	Commerce	36	51.4
	Social Science	2	2.9

Table 1: Demographic profile of the respondents

**Owning of mobile devices and availability of the Internet:**

64.5% of students surveyed had their phones at the age of 14-16 years. 97.1% of the respondent had access to the internet. It is important to note that 97.1% of the students surveyed had internet access on their mobile.62.9% students said that net connectivity is good.

Net Connectivity Speed	Good	Average	Poor
No.	44	22	4
Percentage	62.9	31.4	5.7

Table 2: student's opinion about the availability of the Internet

Usage of Mobile Phones:

Mobile is used for several purposes such as Communication, education, Music; Location-based information, games, shopping, Finance, job search, entertainment and news. College students use smartphones as learning aids in e-learning, web-based learning, to know their course schedule. Students have high smartphone self-efficacy.
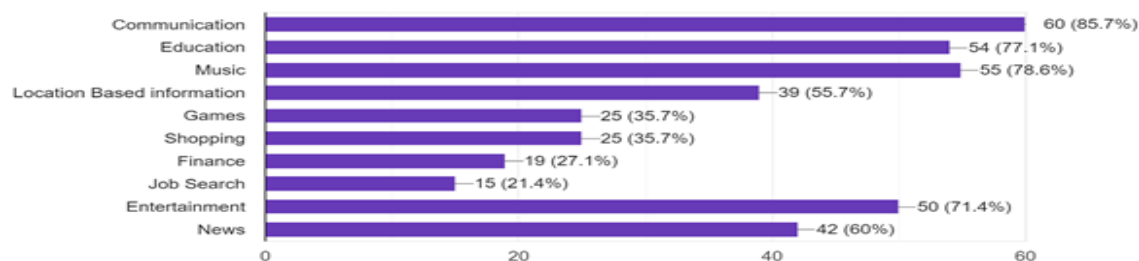
Preference of Mobile access by functional Category

Among this, maximum number of students are using mobile for communication as it is designed for that and 77.1% of them are using it for education purposes. 85.7% of respondents are using mobile for learning. Maximum of 44.3% of students are spending 1-3 hours on mobilefor learning activities.

No.Of Hour's Spent	Less Than 1 Hour	1-3 Hour	3-5 Hour	More Than 5 Hours
No.	27	31	9	3
Percentage	38.6	44.3	12.8	4.3

Table 3: No. of hours spent studying using mobile devices by learners

Students access content such as course schedule, video content, and assignment on mobile. The learning activity includes viewing course videos and contents developed by their teacher or someone else, one can download the content and can use later. The learner's responses show that

38.6% prefer to view course videos and animation developed by others and 14.3% are viewing the course materials created by their teachers.47.1% are downloadingand saving content for lateral use.Learner's preference of learning activity can be shown in the following graphs.
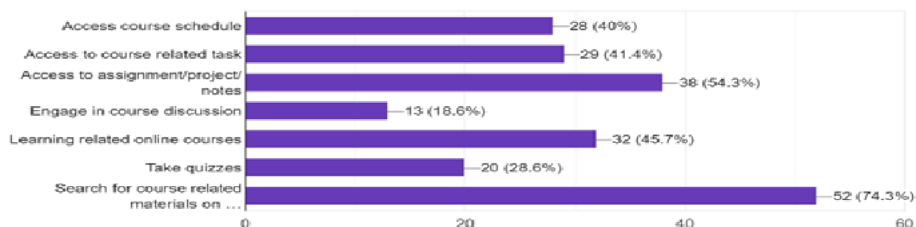
There are many Apps freely available for educational purposes and students are making use of these to get a better understanding of their subjects and get additional knowledge. Contents in these Apps can be downloaded and viewed later also. YouTube and Wikipedia are used by many than accessing TED, Khan Academy, Coursera, Duolingo, Lyndaand Lumosity. As there are many apps are available, they can have a choice of selecting from any one of these. All the contents are free, but the challenge is to select the best one and the one relevant to the course. They are happy with the contents available in the App.

Course Content	Excellent	Satisfactory	Average
No.	28	35	7
Percentage	40	50	10

Table 4: student's opinion about course content

As contents can be viewed from their mobile devices from Any time, Anyone, Anywhere. They can make use of their time to improve their grade.

Grades	Improved	Not improved
No.	39	31
Percentages	55.71	44.29

Table 5: Student's view on the impact of these Apps on their grades:

Chi-Square test in R is used to check the hypothesis.

	Improved	Not Improved	Sum
Male	18	13	31
Female	21	18	39
Sum	39	31	70

By using Chi-square test of independence,

Pearson's Chi-squared test with Yates' continuity correction

data: tb1

X-squared = 0.01226, df = 1, p-value = 0.9118.
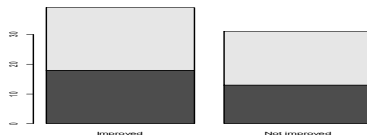
Since P-value is greater than 0.05. Hence, we do not reject the null hypothesis at a 5% level of significance and our data reveals that there is no association between Gender and Grade.

Students preferred mobile for learning as it is easy to carry and few do not have a desktop or laptop at home so using mobile as a device they can access the content and in their class group.

Conclusion:

Constant up-gradation of the knowledge is the need of the hour. Enhancement of skills is required in all employment sector. The result of the survey indicated that the majority of the students are using mobile for learning and are aware of the various application available. Mobile learning helps the students to access to multiple information sources and makes the learning flexible. The m-learning environment will provide more learning opportunities for the learner which allows him to study at anytime, anywhere he wanted to study.

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Natural ingredients for a bacteria-free library collection

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Abstract

Fumigation is widely used for getting rid of pests. This treatment makes use of chemicals. However, if repeated applications are not made, the insects and pests tend to breed again. This treatment also does not take care of the growth of microorganisms that feed on organic substances. India has a warm and humid climate that encourages the growth of microorganisms. Indian tradition makes use of various herbs and spices to preserve reading materials. This study was therefore undertaken to view the effect of locally available herbs and spices on paper. Experiments were carried out in a college laboratory. This was done with the objective of studying the inhibitory action of neem, cinnamon, cloves, pepper and a mixture of all of these herbs and spices.

Keywords

Library preservation, microbial contamination, natural preservatives

Introduction

Most of the insect species that are likely to infest paper collections are attracted to paper because of its size and the adhesives and starches that are used, which all provide food for various insects. Many chemical methods are used regularly to control pests such as silverfish, firebrats, psocids (also known as booklice) and cockroaches. However, paper, being organic in nature, can also be a feeding ground for microorganisms. Moreover, packed bookshelves may obstruct airflow and allow airborne microorganisms to settle and grow on books. Countries like India have a warm and humid climate, which encourages the growth of microorganisms that degrade paper.

The control of these microorganisms is a challenging task as they do not respond to the regular cleaning and pest-control methods of a library. The library environment offers optimal conditions for the proliferation of microorganisms, and this contamination not only has adverse effects on the life of books, but can also affect the health of users along with the air quality of the library.

A study was undertaken to identify the microorganisms growing on paper that had been put through regular biannual pest control. Based on the presence of microorganisms, the action of naturally occurring substances on these microorganisms was studied.

Need for the study

Various library studies carried out across the world have found the existence of bacteria-contaminated collections, despite all the precautions taken against this[AQ5]. Such contamination can also have adverse effects on the health of library users. Hence, the researchers were interested in verifying the bacterial contamination found in a library collection and studying the impact of various natural ingredients on these microorganisms. For this study, commonly occurring substances such as pepper powder, cinnamon powder, neem oil, clove powder and a mixture of all of these were used to study their inhibitory effects.

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Table 1. [AQ11]

Box number	1	2	3	4	5
[AQ12]	Wheat flour + cinnamon powder	Wheat flour + pepper powder	Wheat flour + neem powder [AQ13]	Wheat flour + clove powder	Wheat flour + a mixture of all the herbs and spices
p value	.033947	.008919	.249982	.386154	.157923

Method and observation

The researchers have backgrounds in analytical and medicinal chemistry and organic chemistry, respectively, and were keen to undertake the present study. They sought guidance and support from the Biotechnology Department at the SIES College of Arts, Science and Commerce, which is the parent body of one of the researchers. The college is located in the heart of Mumbai, India, and known as a well-respected institution that has served the ever-growing educational needs of students from the north and central Mumbai suburbs since 1960. The Biotechnology Department was established in 2002 and offers courses for undergraduate, postgraduate and PhD students; it is equipped with a state-of-the-art laboratory and other required facilities (such as PCR [AQ6]and a spectrophotometer). The Biotechnology Department was used to conduct the tests as the materials and instruments required for this study were readily available. The late Dr Rajalaxmi Amudan, an experienced biotechnologist and faculty member of the SIES College of Arts, Science and Commerce, mentored the experimental study.

All of the books selected for the study were subjected to chemical pest control three times a year. However, the samples collected from these books showed the presence of microorganisms. These microorganisms were identified as belonging to the *Bacillus* species by 16S ribosomal RNA tests. The subsequent step was to try and inhibit the growth of these microorganisms with the available resources. Naturally occurring substances like neem, cinnamon, cloves and pepper are readily available and used in day-to-day life. Further, they are known for their medicinal properties. It was therefore decided to study the inhibitory effects of these substances.

To study the effect of naturally occurring substances like neem, cinnamon, cloves and pepper, books belonging to different accession numbers were selected with the view that older books may have more contamination compared to newly acquired books. A ditch-plate method was used to check the inhibitory action of neem powder[AQ7], cinnamon powder, clove powder and pepper powder. This method consisted of preparing a ditch in a sterile nutrient agar plate. The ditch was then filled with the substance mixed in nutrient agar and set[AQ8]. The organisms were streaked evenly across the ditch and incubated for 24 [AQ9]at 37°C. The observed zones of inhibition provided the measurable sensitivity of the bacteria to the antimicrobial substance. The entire procedure was done under sterile conditions to prevent contamination.

A microbial inhibitory count for neem oil was performed in order to confirm its inhibitory action by using slants (5 ml) of nutrient broth and neem oil (1 ml to 3 ml). It was observed that 3 ml of neem oil had the maximum inhibitory effect. Further, to confirm inhibitory action, pellets were made of an equal proportion of wheat flour and cinnamon powder, wheat flour and pepper powder, wheat flour and neem oil, wheat flour and clove powder, and wheat flour and a mixture of all of the above. These pellets were put in boxes containing eight books each, and a standard without any inhibitory agent was also maintained. Swabs were taken before placing the pellets in their respective boxes and after 1 day and 23 days. The microbial counts were compared, and it was observed that[AQ10].

The results of a paired *t* test to test for a significant drop in the number of microorganisms for all five methods are shown in Table 1.

All of the boxes showed a reduction in the number of microorganisms. However, Box 1 and Box 2 – that is, wheat flour + cinnamon powder and wheat flour + pepper powder – showed the greatest reduction in the number of microorganisms over the 1–23-day period. The box without any inhibitory agent showed an increase (matlike appearance) in the number of microorganisms.

Findings and suggestions

Even though neem, cinnamon, cloves and pepper all exhibited inhibitory properties, neem powder [AQ14]was the most effective. However, a dusting of neem powder on books would leave a residue and stick to the hands of users. Neem oil exhibited the greatest effect on microorganisms[AQ15]. Neem oil

could therefore be mixed with methanol and placed in small bottles on bookshelves; being volatile, it would evaporate and inhibit the growth of microorganisms. A mixture of neem oil and methanol in the proportion of 3:2 could be sprayed on shelves or cotton-wool balls dipped in neem oil could be placed on shelves. A further detailed study is required to determine the best method of application.

Components such as cinnamon powder, pepper powder and clove powder, and a mixture of all four herbs and spices, displayed a considerable reduction in microbial activity. Hence, placing pellets made by mixing equal proportions of wheat flour with cinnamon powder, pepper powder, clove powder or a mixture of all four herbs and spices (and water, and then drying them) among book stacks can restrict the growth of microorganisms.

Declaration of conflicting interests

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Author biographies

[AQ1]

INDERSCIENCE
Online

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The emerging mutual fund industry in India: an impact analysis of investors' awareness on investment behaviour

Sodi Jasbir Kaur and Jehangir Bharucha

ABOUT

Abstract

India has more than 1.2 billion people, yet, a mere 3.5% are mutual fund unit investors. This study attempts to explore investors' awareness, perception and experiences towards mutual funds in the Indian city of Indore. The sample size covered 300 investors in Indore who were spread throughout the city and its suburbs. A series of chi square tests were conducted on the data. Out of the respondents, 68 are not even aware of mutual funds and of the 196 respondents who are aware of mutual funds, only 68 (34.69%) have invested in mutual funds. The fixed deposits of banks are the most preferred channel of investment. This study has shown that investment in mutual funds is more often influenced by qualifications, occupation and income. The issue of low penetration of mutual funds can be by increasing the level of financial literacy of Indian investors.
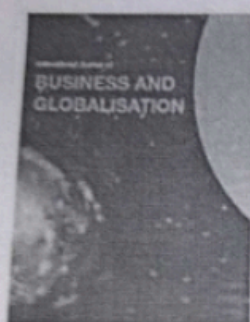
The Opportunities and Challenges of Edutech
in the the Digital Era. Understanding

☐ Atul Sathe*

ABSTRACT

In the modern world of technology, not only Business and commercial activities have gone under tremendous change, but it has its impact on Education sector also. The paper deals with Opportunities and challenges in EduTech. The Unit of Analysis is Users of EduTech facilities. The characteristic of Interest is opportunities and challenges in field of edutech. The objectives of the research methodology are To discover new opportunities in the field of EduTech, To know about the major aspects to be tackled for getting EduTech to rural India, To know about importance of EduTech for students, To ascertain the impact of affordability factor in EduTech, To know if edutech is providing the support of teamwork in schools, To know about the benefits and drawbacks of EduTech for its users. The Methodological Approach of this research is the quantitative approach by conducted Survey. The Sources of Data of this report is based on primary data; Primary source of data used is the questionnaire. Also secondary sources of data have been used like the references of various Google scholar articles and some articles from newspaper. Data collected was analytical, tabulated and percentages were calculated by using pie charts for the purpose of easy understanding. Sample method was Convenient sampling method Sampling units was customers of EduTech portals and Sample size was 40-50. The Research instruments were Structured Questionnaire is used as an instrument, to collect valid primary data. The implication seen that the major users of EduTech are from the age group 20-25. There are still many drawbacks of EduTech which need to be taken care of. The next big opportunity is taking EduTech to the rural areas of India. But this will take as there are a lot many hurdles to be considered while planning the move for this opportunity. But at the same time they are hoping for various improvements.

Keywords : Education, Technology, Digital, Cloud computing, Virtual Reality

INTRODUCTION

Education Technology is an ethical practice for facilitating learning and better performance by creating, using and managing appropriate technological processes and resources. Although this _field may sound highly specialized, its potential implications are far-reaching and affect many segments of the population.

Services like **Byju's** and **Unacademy** provide solutions for teachers and schools. Upon its development and correct application, educational technology can truly be an industry-changing experience for educators in streamlining lesson planning, reporting, and record-keeping which is time consuming and simplifying communication.

Successful development of EduTech will help improve the future. Accessible and effective solutions for superior education empower students and teachers to focus on the aspect of learning and understanding. They can do much more with the resources they have, for example, improving the quality of education available to youth around the world and better equipping them for the future.

VARIOUS SERVICES PROVIDED BY EDUCATION TECHNOLOGIES

*Assistant Professor - H.R. College of Commerce And Economics

1. Customized Learning Experiences

Learning methodologies and experiences are never be the same for everyone, as every student is different ; but the earlier education systems could never accommodate for the required custom learning experience as there were too many limitations. Modern technology in education facilitates customized teaching and learning methodologies. For example, a junior surgeon now can seek guidance for a critical procedure during the operation right through his mobile app.

2. Cloud Computing

Cloud computing has impacted high technology education in a big way. It helps to store data of students on clouds. The anytime-anywhere accessibility of information stored in remote cloud servers of the apps has made it possible to access courseware and educational materials from any device and from anywhere

3. Speech-To-Text Options

A vast majority of devices and app platforms are providing features like Samsung's Bixby. Such smart assistants respond to voice commands and make things easier for learning.

4. Virtual and Augmented Learning Experiences

Virtual Reality and Augmented Reality is a big boost to Edtech. If you want to learn about space objects just by running a 3D space video on your VR headgear, you can float in space while a background voice continues depicting you the Milky Way in detail. Real-time broadcasting of critical surgical operations allows medical students to learn through a more immersive experience.

5. 3D Printing

3D printing, which is also known as prototyping, allows students to learn with a more tangible and physical experience. A student can easily shape his idea of an object thanks to 3D printers.

6. Learning Analytics

The huge volume of education information and data give birth to learning analytics, as it is increasingly important to assess and evaluate student engagement, traction, and learning output.

RESEARCH METHODOLOGY

RESEARCH PROBLEM

Understanding the opportunities and challenges of EduTech in the digital era.

Problem Statement –Opportunities and challenges in EduTech.

Unit of Analysis – Users of EduTech facilities

Characteristic of Interest – opportunities and challenges in field of EduTech

METHODOLOGICAL APPROACH

In this report we used the quantitative approach by conducted Survey.

SOURCES OF DATA

- This report is based on primary data.
- Primary source of data used is the questionnaire.
- Also secondary sources of data have been used like the references of various Google scholar articles and some articles from newspaper.

TOOLS USED FOR DATA ANALYSIS

Data collected was analytical, tabulated and percentages were calculated by using pie charts for the purpose of easy understanding.

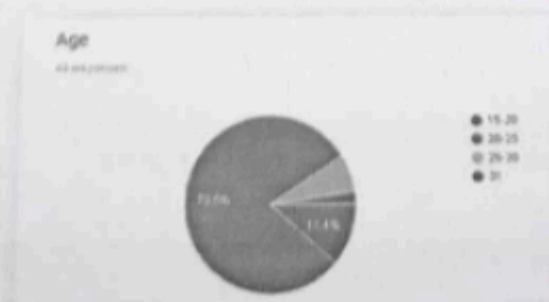Sample method- Convenient sampling method

Sampling units- customers of EduTech portals

Sample size- 40-50

Research instruments- Structured Questionnaire is used as an instrument, to collect valid primary data.
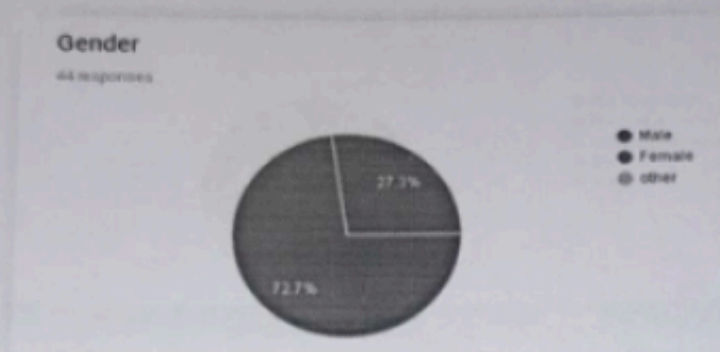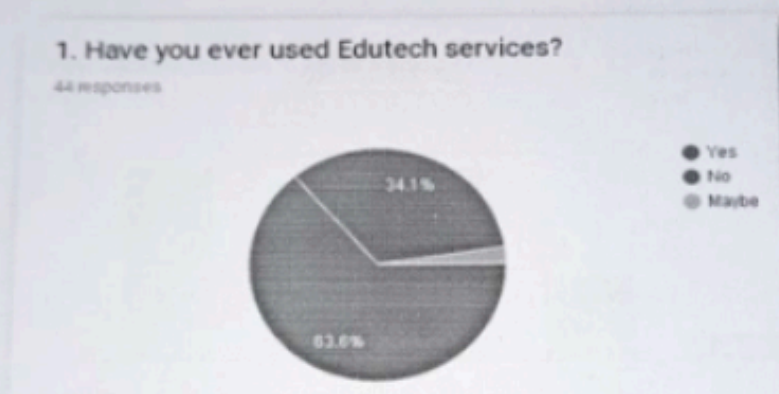
ANALYSIS

1. Age

As seen in the chart above, edutech services are often used by the age group 20-25.

2. Gender

Gender
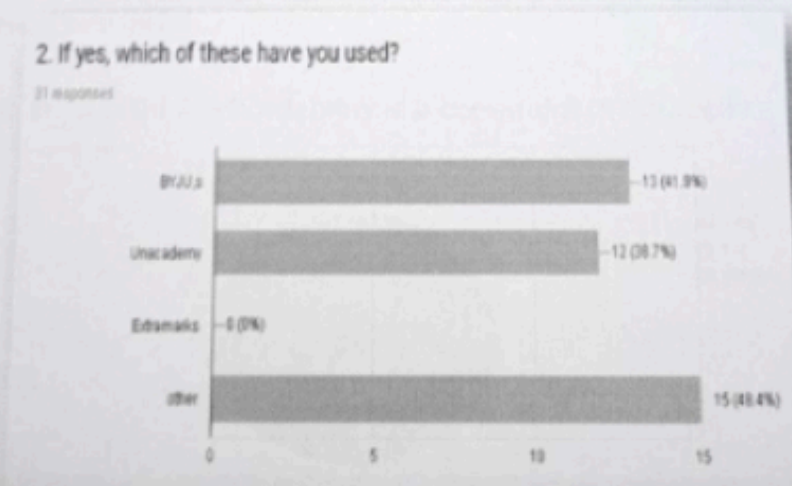
44 responses

Males are the dominant users of the services.

3. Users of edutech services

1. Have you ever used Edutech services?

44 responses

About 64% of the sample has used edtech services.

4. Applications used

2. If yes, which of these have you used?

31 responses

Most number of respondents has used BYJU's.

5. Most useful for these subject

3. Which subjects do you think is EduTech the most useful for?

Most people are of the opinion that edutech   services are useful for all kinds of subjects, be it theory or practical.

6. Usefulness

4. How useful is EduTech to you as a student?
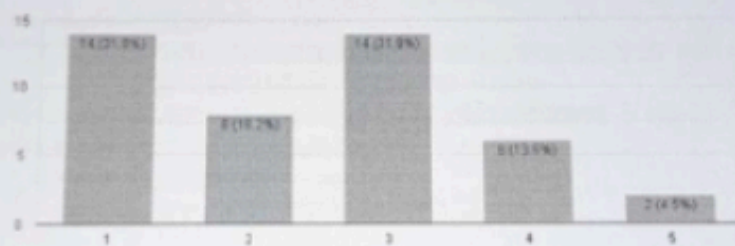
There are an equal number of respondents who   voted for neutral and very useful.

7. Affordability being a constraint

5. Do you think affordability is a constraint in Edutech?
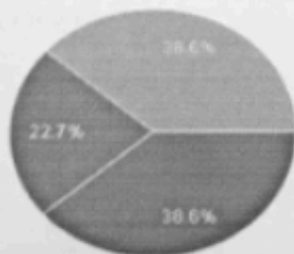
There are equal number of respondents who aren't   think that it is a constraint.
sure about affordability being a constraint and those who

8.   **EduTech supporting teamwork**

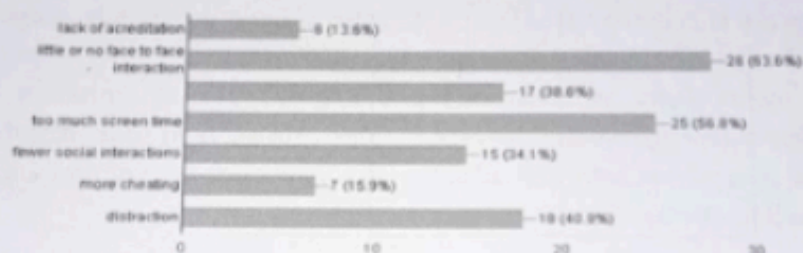6. Can EduTech support teamwork, which is major quality taught in schools?

44 responses

A large portion of the sample size is of the mindset   that edutech can affect the quality of teamwork.

9.   **Major drawbacks**

7. What are the drawbacks of such technology?

44 responses

Most people have said that the major disadvantage is that there is little ort no face to face interaction, along with an increased amount of screen time. Also there is a lot of distraction when studying through devices because of various games and chat options available on the device.

10.   **Pros of Edutech making it up for the cons of traditional education system**

8. Do you think the pros of EduTech can make up for the cons of traditional teaching methods?
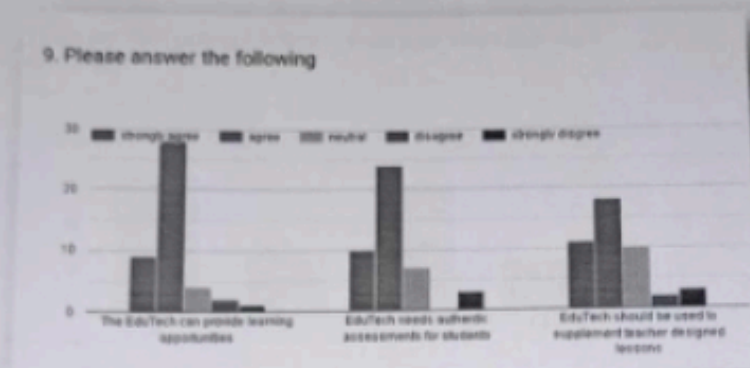
44 responses

Almost 46% of the sample opines that the advantages and various features of the edutech services can make it up for the cons of the traditional education system that has been followed for the past decades and can together come up as an excellent teaching tool.

II. Degree of agreeableness on various questions

9. Please answer the following

The first question is regarding the better opportunities edutech can provide, and a high percentage of the sample size agrees that it can provide better opportunities.

The second question is regarding the improvements in edutech and if it needs better assessments for students who use the facilities. Again most people agree with the idea that improvements are needed.

The last question in this section is if people think that edutech should be independently used by students or if it should be supplemented with teacher designed lessons. Here the opinions are quite spread out but again the highest votes are for people agreeing that it should supplement teacher designed lessons.

10. Are you content with EduTech?
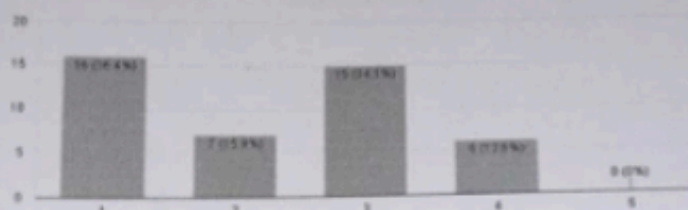
44 responses

- Yes
- No
- Maybe

31.8%
20.5%
47.7%
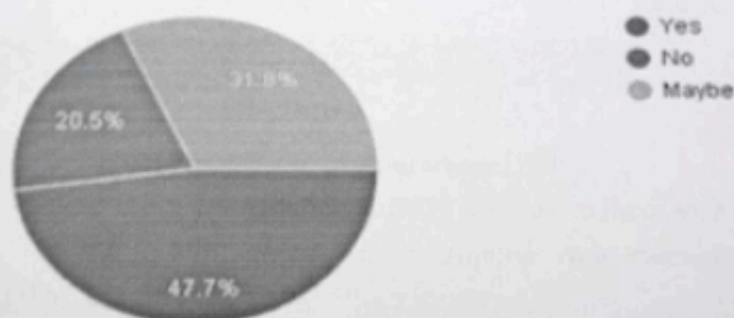
12. **Satisfaction regarding edutech**

Most people are content with edutech and its overall services.

13. **Getting Edutech to Rural India a challenge**

11. Do you think getting EduTech to Rural India would be a major challenge?
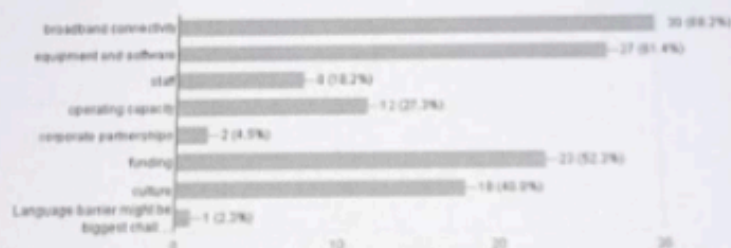
Most people agree that taking edutech to the rural villages of India would not be an easy task as there are a lot of hurdles in the way, which are listed in the next question.

14. **Major challenges in taking edutech to rural India.**

12. What would be the major aspects to be tackled for getting EduTech to rural India?

Broadband, equipment and software would come as major challenges in the task.

CONCLUSION

- It is seen that that major users of EduTech are from the age group 20-25.
- There are still many drawbacks of EduTech which need to be taken care of.
- The next big opportunity is taking EduTech to the rural areas of India.
- But this will take as there are a lot many hurdles to be considered while planning the move for this opportunity.
- Still most people are content with EduTech.
- But at the same time they are hoping for various improvements.
- These include improving the assessment tests

which can be made to be based on past question papers or the current affairs, with respect to the subject.

- Another improvement can be well trained batches of staff which can help the students learn better by supplementing the technological services with their knowledge of the subject.

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