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## From Editors Desk

Dear Authors, Academicians, Researchers & Readers... It gives us immense Pleasure & great Privilege to express this Editorial Note!!

It is a great honour for us to organize and convene an International Conference on “**India as a Global Rising Power**”. The objective of this conference was to provide a platform to academicians, researchers, experts from industry for constructive deliberation and discussion and also to find out the strengths, weakness, opportunities and challenges in all sectors from global perspective.

We are glad to receive a good number of quality papers from various research scholars nationally and internationally .Our goal is to provide Readers a well constructive platform for sharing Knowledge We believe in power of Research, Sharing Innovations & Knowledge.

We are thankful to our Chairman Prof. B.D. Patil Sir and our Director Mrs. Anita Patil More for giving us the support and encouragement.

Finally, we take this opportunity to convey our heartfelt thanks to all the delegates, teaching and non-teaching staff for their active participation in the conference.

Asst. Prof. Shubha Shah

Dr. Bhavika Karkera

Convener of the International Conference

I/C Principal

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## **A Brief study on the Importance of Real Income, Renewable Energy Consumption, and Energy Investment in India's Emission Reduction**

Author's Name: Prof. B. D. Patil  
Designation: Chairman  
Dnyan Ganga Education Trust

### **ABSTRACT**

Achieving ecological maintainability has turned into a worldwide drive while tending to environmental change and its belongings. Consequently, there is a need for development on piece of economies as they look for energy for practical turn of events. Subsequently, we investigate the instance of India an exceptionally industrialized and weighty producer of fossil fuel byproduct. To this end, this study investigates the impact of environmentally friendly power, non-sustainable, monetary development, and interest in the energy area on CO<sub>2</sub> emanation in the Indian economy. Accepted cointegration relapse (ACR), completely adjusted least squares (FMOLS) and dynamic least squares (DOLS) were utilized to get to the long-run flexibility of the factors as well as Granger causality examination to recognize the bearing of causality relationship among the featured factors. Experimental relapse shows a negative connection between CO<sub>2</sub> discharge and environmentally friendly power. Hence, proposing that environmentally friendly power fills in as a panacea for feasible improvement notwithstanding monetary development direction. Notwithstanding, there was a positive connection between CO<sub>2</sub> outflow and both non-sustainable and genuine Gross domestic product development. On the Granger examination, we notice a one-way causality among environmentally friendly power utilization and CO<sub>2</sub> emanation, monetary turn of events, and energy venture. These results have sweeping strategy bearing of natural supportability focus in Indian economy.

### **KEYWORDS**

Environmental Sustainability, Carbon Reduction, Renewable Energy, Fossil-fuel Energy

### **Introduction**

Achieving natural supportability has turned into a worldwide drive while tending to environmental change and its belongings. Then again, non-environmentally friendly power utilization has a determined creation gain for a long time (Adedoyin et al., 2020). Nonetheless, the decrease of petroleum derivative sources and the issue of anthropogenic environmental change has a wide accentuation on manageable energy improvement. With the appearance of advancements and the improvement of natural preservation, clean energy decisions are dynamically significant substitutes. Nonetheless, clean energy arrangements remain somewhat immature in both creating and high level business sectors, in spite of the fact that they are progressively require an overall change to maintainable and low-carbon energy sources. This demeanor is being reverberated by the Intergovernmental Board on Environmental Change (IPCC) on effective examinations on the environment drove metropolitan improvement banter was the manner by which the progress from a nonrenewable source as petroleum derivative energy sources to maintainable energy (renewables) as wind, photovoltaic and hydro energy would encourage monetary development in developing business sectors (Solarin et al., 2021). By and by, the examination of the effect of practical and non-environmentally friendly power sources on financial development renders bits of knowledge on supportable energy and comprehensive development procedures as set by Apergis and Payne (2012). Throughout the long term, many investigations have attempted to distinguish the effect of environmentally friendly power usage, non-renewable energy source use, and supportable

advancement on natural corruption. The mass writing has not had a purposeful understanding in the writing which this study tries to overcome this issue. Belaid and Youssef (2017) investigate the complex causal relationship including CO<sub>2</sub>, power age use, fossil-based power utilization, and supportable development in Algeria through 1980-2012. autoregressive Worldwide Slack Cointegration approach was used. Exact discoveries support the presence of long haul linkages between boundaries. That's what they find, in the long haul, pay action and non - maintainable power utilization hurt the improvement of the environment, while the utilization of sustainable power helpfully affects the environment. Also, Ito (2017) utilized board information from 42 high level states from the time period of 2002-2011 to investigate deductively the relationship association CO<sub>2</sub> contamination, clean and non - environmentally friendly power use as well as practical turn of events. Their discoveries show that non-environmentally friendly power involved negatively affects feasible advancement in created countries. They notice that the utilization of environmentally friendly power energy drives well to practical advancement later on. Boontome et al. (2017) analyzed the causal contribution in regards to petroleum derivative, clean energy, outflow, and maintainable advancement in Thailand from 1971 to 2013 using the cointegration and causality strategies. They recognized the presents of cointegration including the factors. From the causal inclusion, it was seen that a one-way bearing was distinguished including petroleum product and outflow. That's what their examinations uncovered; petroleum product brings emanation up in Thailand. Also, Inglesi-Lotz and Dogan (2018) addressed the errors in the documentation by assessing the elements (sustainable and non-inexhaustible limit, pay and exchange transparency) on CO<sub>2</sub> outflow for the 10 biggest oil makers in Sub-Saharan Africa for the span 1980 to 2011 by using thorough cross-subordinate board estimate draws near. The drawn out relationship among the elements was laid out. The extra factors consolidated help this study highlights the determinant of fossil fuel byproduct for the instance of India. The fuse of extra factors help in evading for discarded variable predisposition in the econometrics displaying. The selection of India is roused by first, been one of the significant developing energy-subordinate states on the planet. Second, India's equilibrium of energy is to a great extent constrained by worldwide petroleum derivative sources. By the by, India's per capita utilization of clean energy is much underneath that of most arising nations (Ohlan, 2015, Ohlan and Ohlan, 2016). The equivalent is supposed to rise essentially in the predictable period, through the journey for a superior prevalence of life as well as the limit with respect to outstanding development of the modern fragment in current strategies (i.e., Fabricate Asia, Public Modern Zones, Mechanical Asia, and Adventure India). Development of energy creation nearby, and then again, is probably not going to go on with increased seriousness. As an outcome, the state's dependence on bringing in assets is anticipated to rise even extra before long. Any deficiency of petroleum product supplies because of a flighty geological condition could prompt outrageous energy deficiencies, which could, accordingly, upset India's financial development. it is on this reason this study influences on FMOLS, DOLS, and Authoritative Cointegrating Relapse (CCR) for the Indian clean energy and petroleum product utilization monetary development by investigating the drawn out versatility and causality connection between the featured factors. The rest of this study is organized as: Area 2 offers the information and strategy utilized While segment 3 delivers the conversation of experimental outcomes. Area 4 closes the review with strategy course.

## Methodology

This current study explores the effect of both clean and non- renewable energy usage on CO<sub>2</sub> emission for the case of India. To do this, data from the World Bank indicators were used. Pollutant in the form of CO<sub>2</sub> emission is used for environmental degradation while GDP growth in (2010 US) has been used as a measure for economic growth and investment in the energy sector (Investment in energy with private involvement (current US\$) and growth of the economy (GDP per capita (constant 2010 US\$)). The study data spans from 1990 to 2016 which is determined by the accessibility of data.



### 2.1. Formulation of Model

To explore the effect of sustainable energy usage and non-renewable energy consumption on CO<sub>2</sub> emission in a carbon-income function, the following model is fitted as:

$$CO_{2t} = f(REC_t, NREC_t, GDP_t, IEC_t) \quad (i)$$

here CO<sub>2</sub> presents carbon dioxide emissions in metric kg per, GDP growth, REC represents renewable energy consumption (% of total final energy consumption), NEC denotes fossil fuel energy consumption (% of total), GDP= GDP per capita (constant 2010 US\$) and IEC= Investment in energy with private participation (current US\$). There exist few studies in the extant literature on the relationship between energy consumption and emissions level (see Khoshnevis Yazdi and Shakouri, 2017; Nguyen and Kakinaka, 2019), the current study focuses on the Indian economy to explore the determinants of CO<sub>2</sub> emissions. More specifically this study incorporates investments in the energy sector to substitute trade transparency and urbanization which distinguishes it from the studies of (Khoshnevis Yazdi and Shakouri, 2017).

Utilizing the double log-linear modification of the Eq variables.

(1) The econometric definition of the time series is specified as:

$$\ln CO_{2t} = \beta_0 + \beta_1 \ln REC_t + \beta_2 \ln NREC_t + \beta_3 \ln GDP_t + \beta_4 \ln IEC_t + \mu_t \quad (ii)$$

Where Ln denotes logarithm transformation of betas to achieve elasticity of the outlined variables.

### Empirical Results and Discussion

This part examines and depicts all observational discoveries in an adapted way. Table 1 shows that the CO<sub>2</sub> has the greatest level over the range going through review. The two arrangements show negative slants separated from emanations and Gross domestic product, while Pearson's pairwise connection uncovers that CO<sub>2</sub> discharge are firmly connected with financial turn of events and other macroeconomic factors viable. For stationarity purposes, the Dickey and Fuller (ADF) (Barter and Fuller, 1981) was used to check the stationarity structure among the variables utilized in this examination. The cointegration strategy was carried out to decide the drawn out balance connection between the factors in the Eqs. (2). Johansen cointegration test balance (cointegration) is utilized to decide the cointegration properties. While the FMOLS, DOLS, and CCR were utilized to check the drawn out flexibility of the factors. Consequently, Granger Causality examination was used to confirm the causal connection of the factors. Table 2 presents the stationarity test. The stationarity test is important to find out the incorporation properties of factors under survey. This is appropriate to try not to work with factors incorporated of request 2. As such factors will convert into fake relapse and likewise deceptive surmisings (Bekun and Agboola, 2019). From Table 2 we affirm that our review factors are incorporated of request 1. i.e., after first differencing. In this manner, we continue to investigate the harmony properties of the series as found in Table 3.

The Johansen cointegration test shows that the null hypothesis of no cointegration was rejected. Thus indicating 2 cointegration vectors.

**Table 1: Descriptive statistics and correlation Matrix analysis**

	<b>LnCO<sub>2</sub></b>	<b>LnGDP</b>	<b>LnIEC</b>	<b>LnNREC</b>	<b>LnREC</b>
Mean	0.1069	6.9287	21.329	4.1851	3.8366
Median	0.0911	6.8868	21.217	4.1833	3.90648
Maximum	0.2562	7.6500	24.263	4.3437	4.0716
Minimum	-0.0508	6.3552	16.410	3.9846	3.5309
Std. Dev.	0.0992	0.4022	1.6030	0.1027	0.1761
Skewness	0.1118	0.2063	-0.5598	-0.2381	-0.3881
Kurtosis	1.63464	1.8250	4.5433	2.0685	1.6618
	<b>LnCO<sub>2</sub></b>	<b>LnGDP</b>	<b>LnIEC</b>	<b>LnNREC</b>	<b>LnREC</b>
Correlation analysis					
LNCO <sub>2</sub>	1				
LNGDP	-0.9123***	1			
LNIEC	-0.494***	0.542***	1		
LNNREC	-0.886***	0.982***	0.594***	1	
LNREC	0.841***	-0.985***	-0.547***	-0.964***	1
***=0.01, **=0.05 and *=0.10					

Thus, suggesting cointegration among the variables over the sampled period.

This study applied a battery of relapse strategies in particular, the standard cointegrating relapse (CCR), completely changed least squares (FMOLS) and dynamic least squares (DOLS) were utilized to get to the long-run versatility of the variable which is introduced in Table 4 above. Structure the assessment it was checked that; sustainable power utilization was 1% adversely huge in every one of the three assessments. Consequently, a 1% expansion in sustainable power utilization will diminish outflows by 1.24%, 1.15% and 1.25% separately. Moreover, all the three-assessment showed a positive huge for non-sustainable power utilization. In this manner, a 1% expansion in the use of non-sustainable power will expand outflow of 0.71%, 1.08% and 0.84% separately. In addition, the assessments showed that Gross domestic product had 1% adversely critical level with discharges. Consequently, 1% increment in Gross domestic product will diminish emanation by 0.91%, 0.94% and 0.95% separately over the long haul and all the assessment confirms the discoveries of Bekun et al. (2019). Ultimately, there was a 5% adversely huge at CCR and FMOLS in regard to interest in the energy area. Hence, a 1% expansion in interest in the energy area will diminish discharge by 0.0081% in CCR and 0.0082% in FMOLS. From the table over, the assessments show that every one of the factors influence emanation both in sure or negative over the long haul. Subsequent to affirming the long-run versatility of the factors, there was a need to really take a look at the causality relationship of the factors by utilizing the Granger Causality examination.

**Table 2: Unit root test**

Statistics (Level)	LnCO2	LnGDP	LnREC	LnNREC	LnIEC
∅∅	-0.4474	2.8418	1.1731	-2.0601	-2.5154
∅∅	-2.7396	-2.4748	-1.8322	-2.8044	-2.9580
Statistics (1 <sup>st</sup> difference)	LnCO2	LnGDP	LnREC	LnNREC	LnIEC
∅∅	-5.7643***	-4.8977***	-3.3439**	-4.9050***	-8.0448***
∅∅	-5.6246***	-5.4344***	-3.5334*	-5.1156***	-7.9385***

\*\*\*=0.01, \*\*=0.05 and \*=0.10.; thus, πτ is with constant,

∅∅ is with constant and trend

**Table 3: Johansen test to cointegration**

Hypothesis no. of CE (s)	Fisher stat (from trace)	Eigenvalue	P-value
r ≤ 0	97.982***	0.827203	(0.0001)
r ≤ 1	50.580**	0.641350	(0.0271)
r ≤ 2	22.894	0.358380	(0.2513)
r ≤ 3	10.913	0.205607	(0.2169)
r ≤ 4	4.6982	0.159710	(0.3302)

\*\*\*=0.01, \*\*=0.05 and \*=0.10

**Table 4: CCR, DOLS and FMOLS**

Variables	CCR	DOLS	FMOLS
LnGDP	-0.9119***	-0.9400***	-0.9478***
P-value	(0.0000)	(0.0009)	(0.0000)
LnREC	-1.2397***	-1.1447***	-1.2518***
P-value	(0.0000)	(0.0037)	(0.0000)
LnNREC	0.7097***	1.0838**	0.8366***
P-value	(0.0017)	(0.0282)	(0.0054)
LnIEC	-0.0081**	-0.0024	-0.0081**
P-value	(0.0432)	(0.8224)	(0.0142)
Constant	8.3856***	6.5367**	8.1495***
P-value	(0.0000)	(0.0127)	(0.0000)
R-SQUARE	0.957	0.9836	0.9567
ADJ R-SQUARE	0.949	0.9545	0.9492

\*\*\*=0.01, \*\*=0.05 and \*=0.10

**Table 5: Granger causality analysis**

Null hypothesis	F-Statistics	P-value
LNGDP≠LNCO <sub>2</sub>	1.566	(0.2312)
LNCO <sub>2</sub> ≠LNGDP	0.004	(0.9953)
LNIEC≠LNCO <sub>2</sub>	0.140	(0.8699)
LNCO <sub>2</sub> ≠LNIEC	0.722	(0.4967)
LNNREC≠LNCO <sub>2</sub>	2.421	(0.1121)
LNCO <sub>2</sub> ≠LNNREC	1.192	(0.3223)
LNREC≠LNCO <sub>2</sub>	1.003	(0.3829)
LNCO <sub>2</sub> ≠LNREC	3.401*	(0.0516)
LNIEC≠LNGDP	1.226	(0.3126)
LNGDP≠LNIEC	4.389**	(0.0249)
LNREC≠LNGDP	0.296	(0.7460)

LNREC≠LNGDP	2.403	(0.1138)
LNGDP≠LNREC	0.247	(0.7831)
LNGDP≠LNREC	2.715*	(0.0883)
LNNREC≠LNIEC	0.490	(0.6186)
LNIEC≠LNNREC	0.015	(0.9843)
LNREC≠LNIEC	1.042	(0.3693)
LNIEC≠LNREC	0.648	(0.5326)
LNREC≠LNNREC	1.199	(0.3203)
LNNREC≠LNREC	0.842	(0.4440)

\*\*\*=0.01, \*\*=0.05 and \*=0.10. While≠denote does not “Granger cause”

The analysis of Granger causality reported in Table 5 shows that a - one-way directional causality was identified between renewable energy utilization and emission, sustainability development and investment in the energy sector, and sustainable development and renewable energy utilization. These outcome resonates with the finding of Gyamfi et al. (2020) and also give credence to the need for energy diversification to cleaner energy technologies to foster sustainable development targets.

### Concluding Remarks

The reason for this study is to look at what the Indian economy discharge is meant for by environmentally friendly power utilization, non-sustainable power utilization close by financial development and interest in the energy area somewhere in the range of 1990 and 2016. Our review information were obtained from the World Bank pointers data set. India is among the arising 7 countries (E7) and that implies the country's consideration is moving to industrialization with a great deal of human exercises which will bring about delivering additional emanation which originates from anthropogenic exercises which thusly influence the climate over the long haul. Most of countries have thusly embraced drives and development into moderating the decrease of discharge by severe adherence to the Kyoto methodology by which India isn't excluded from these steps for a cleaner and more tenable biological system. To this end, this study utilized the standard cointegrating relapse (CCR), Completely altered least squares (FMOLS), and dynamic least squares (DOLS) to get to the long-run versatility of the variable as well as the Granger Causality investigation to distinguish the causality relationship of the factors. The relapse from CCR, DOLS and FMOLS are together as one that environmentally friendly power fundamentally diminishes discharge by 1.24%, 1.15% and 1.25% separately, non-environmentally friendly power utilization increments outflow by 0.71%, 1.08%, and 0.84% individually and Gross domestic product diminishes emanation by 0.91%, 0.94% and 0.95% separately. This large number of three factors that is sustainable power, non-environmentally friendly power and Gross domestic product assessments are in affirmations to the investigation of Bekun et al. (2019). Besides, interest in monetary improvement had a 0.0081% in CCR and 0.0082% in FMOLS diminishing effect on outflow over the long haul. By and by, Granger Causality test shows a unidirectional causality among environmentally friendly power utilization and emanation, supportability improvement and interest in energy area and maintainability advancement and environmentally friendly power utilization. Given the above-featured results, from a strategy viewpoint, Indian economy needs to embrace measures, for example, impetuses for carbon decrease, charge benefits, and monetary guide to organizations assembling such frameworks for sustainable power. Moreover, there is a requirement for a change in perspective from the customary energy utilization blend which depends on petroleum derivative to renewables. Renewables have been illustrated as more harmless to the ecosystem to natural manageability focuses as well as interest in energy from public-private organizations in the energy area. This foothold will convert into a green climate and monetary development.

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## Science Teachers' opinions on the Education for Sustainable development-based learning to School Children

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### ABSTRACT

This study plans to depict educator's impression of the execution of sustainable development-based learning in science, physical science and science subjects. This examination is a subjective illustrative exploration. The subjects of the examination are the science, physical science and science educators in nine territories of North India. The information was gathered by utilizing interview sheets, poll and perception sheets. As per the examination information, the outcome shows that the term sustainable development is as yet viewed as unfamiliar by 77.7% of the educators, the execution of sustainable development-based learning can be done in generally excellent classification by 44.44% of the instructors and in great class by 33.33% of the educators, and 22.22% of instructors experience issues in carrying out sustainable development-based learning. Different outcomes likewise show that the idea of sustainable development permits it to be applied in every one of the three subjects with the qualities of the material connecting with the climate. This examination can be a proposal for sustainable science learning.

### KEYWORDS

Teacher Perception, Sustainable Development, Science

### Introduction

The idea of sustainable development is characterizing by World Commission on Monetary Development, right off the bat, at 1987 in Brundtland report [1]. Joined Countries Instructive, Logical, and Social Association (UNESCO) and the Association for Monetary Co-activity and Development (OECD) suggest training for sustainable development (ESD) as the job idea to advance sustainable development objectives. It centers around working on the nature of the climate, personal satisfaction, and a more evenhanded financial development for maintainability. A sustainable society requires sound, knowledgeable, gifted, and dynamic residents that are educated and persuaded to live more reasonably and guarantee people in the future's personal satisfaction [4, 5]. UNESCO advances a few learning techniques and models to [3] carry out instruction for sustainable development specifically: [6, 7], project-based learning [8], request learning [9], story-based learning, esteem based schooling, true evaluation, issue based learning, outside-class learning, and critical thinking networks. The presence of manageability and ESD in the educational plan shifts all over the planet and the execution of ESD in schools and colleges has been concentrated on in a few nations from various mainlands. Australian elementary teacher's records of their training represent the manners in which they connected with the materiality of neighborhood places as a fundamental piece of sustainable schooling. They distinguished ESD rehearses inside the four arrangements of relations: the materiality of school grounds; associations with nearby places; organizations with local area; and inventive approaches [10]. The educator should can dissect the attributes of the material, understudies and learning targets so the upsides of sustainable development can be endlessly implanted appropriately in the understudy's character [11].

Participatory dynamic showing strategies animate understudies to ponder their own finding out about manageability Participatory techniques, for example, critical thinking, conversations,

discusses, introductions, hands on work, tests, exhibits, ventures and co-usable learning advance capabilities like decisive reasoning, envisioning future situations and settling on choices in a cooperative manner. In this exploration, the execution of training for sustainable development is audited as the criticism to foster the advancement and renewal of schooling in Indonesian school system. The point of this exploration is to depict educator's discernment on the execution of sustainable development-based learning in science, physical science and science subjects.

### **Role of Science Education in Promoting Sustainable Development**

Sustainable development is likely the most overwhelming test that mankind has at any point confronted, and accomplishing it expects that the major issues be tended to promptly at nearby, local and worldwide levels. At all scales, the job of science training is pivotal; logical information and suitable innovations are integral to settling the monetary, social and ecological issues that make current development ways unsustainable. Spanning the development hole between the North and the South, and lightening neediness to give a more fair and sustainable future for all, requires novel coordinated approaches that completely consolidate existing and new logical information [2]. Quick advances in science schooling plays had critical impact in advancing the execution of sustainable development technique, especially in the space of data innovation, biotechnology, new materials innovation, new energy and sustainable power innovation, high level assembling innovation, aviation innovation, maritime innovation and natural innovation, have given viable means to ease asset deficiencies, check ecological corruption, further develop the human ailment, and, most importantly, accomplish composed development of society, economy and climate [3]. Prepared accessibility of sound logical data and counsel is fundamental for emerging nation chiefs to go with informed science-based decisions that shape public development techniques. Growing admittance to science and innovation data and limit into creating districts will correspondingly speed up their ways to development and thriving in an naturally sustainable way[8]. Science and innovation are basic to the clever administration and utilization of regular assets, natural stewardship and financial development - - in short - - they are fundamental for supportability. An "Drive for Future Horticulture and Food Frameworks," for an exploration, expansion and training cutthroat awards program to resolve basic arising rural issues, including future food creation, sanitation, ecological quality, normal asset the board, and homestead pay. Key program regions are in progress in agrarian genome research, food handling, and agrobiotechnology, for instance. Need financing is made to proposition that connect with various States, scholastic and examination foundations and that coordinate exploration, augmentation and training [7]. Science training has been utilized in boundless exercises from advancing high and fundamental innovative work to state of the art innovation on one hand, to serve the mechanical necessity of the everyday person through development of suitable abilities and innovation. In any case, the advantage of science and innovation has not arrived at the socially prohibited and minimized populace gatherings, who are on the excursions and edges of science and innovation development benefits [11].

### **Science Teacher's Action in Sustainable Development**

Science instructors have the information base to comprehend sustainable development and the relational abilities to make sense of it. They can be a significant figure expanding the local area comprehension of this most critical issue. Great educators teach about Reuse as a best practice, advocate Lessen in energy utilization and discuss Reuse for discussion. In any case, Extraordinary educators teach, yet in addition outfit their understudies with the devices to reexamine procedures to handle issues in reality. Issues like sustainable development which can be handled with a tool compartment of reasonable information and commonsensical application. How about we start little, at the grounds first off. We have Ecological Sciences as a course proposed to understudies. Why not

pepper that course with ecological maintainability concentrates on which will help understudies find and better comprehend logical exploration, its strategies and its outcomes as it connects with sustainable development [13]. Educators are strong problem solvers in the existences of youngsters. Zeroing in on the embellishment of balanced youngsters anything the topic being shown not just advantages the understudies, it additionally makes the occupation of the educator simpler. Prior we discussed factors inside and unchangeable as far as one might be concerned. One variable absolutely inside the circle of control of educators is their demeanor towards every understudy, even to the ones who give issues. Educators who capability in a sustaining approving way will receive extraordinary benefits regarding class conduct and understudy receptivity. Instructors are the manufacturers of the country. Science educators set out different open doors for understudies to take part in doing exercises that will empower them figure out their general surroundings, make new disclosures, tackle fascinating issues and foster abilities that are supportability driven. It was underscored that science instructors in this manner, need to perceive the idea of logical undertakings and how it connects with science instructing assuming they are to help their understudies totally grasp the substance and basic standards of science. Compelling and steady Execution of the science and innovation educational plan will prompt neediness lightening, expansion in efficiency and quick financial development. This will unquestionably diminish the capital flight caused on importation of products. Science educators are progressively understanding the need to become problem solver to all the more likely address the issues of understudies, families and networks they serve and subsequently satisfy society's assumptions regarding science instructors' polite obligation. Science educators assume vital part in shaping the understudies' brain towards supportability as they confer the information on science.

## **Methods**

### **Research Design**

This exploration is a subjective expressive examination. The goal of this exploration is to depict educator's discernment on the execution of sustainable development-based learning in science, physical science and science subjects. The information was gathered by utilizing interview sheets, poll and perception sheets. The information gathering process comprise of pre-endlessly educating process. In pre-educating, the subject educator was asked with a few inquiries that pertinent to the point. This movement plans to depict their insight and standards about schooling for sustainable development in Indonesia. In showing process, the educator was evaluated about their showing cycle on execution of schooling for sustainable development idea through created learning model, that is ESD character model

### **Research Subject and Location**

The subjects of the research are the chemistry, physics and biology teachers in nine provinces of North India.

## **Result and Discussion**

The subjects of this research are the chemistry, physics and biology teachers in nine provinces of North India. There is one teacher for specific subject in each province.

In pre-teaching stage, the subject teacher was interviewed with several questions that relevant to the topic. This activity aims to describe their knowledge and paradigms about education for sustainable development in India. The questions are: (1) Have you ever heard about education for sustainable development? (2) What do you know about the term sustainable development? (3) In your opinion, how to integrate sustainable development into classroom? The answer from some teachers about those questions is shown in Table 1.



**Table 1.** Teacher responses on sustainable development

Questions	Teacher Responses									
	1	2	3	4	5	6	7	8	9	
Have you ever heard about education for sustainable development?	Not yet	Yes	Not yet	Not yet	Not yet	Yes		Not yet	Not yet	Not yet
What do you know about the term sustainable development	Perhaps it is a concept about sustainability	It talks about economy, environment, and social.	No idea	No idea	No idea	It has goals. It is concerning about our environment, economy that refers people, social.	No idea	No idea	Perhaps it is about development of something .	
In your opinion, how to integrate sustainable development into classroom?	Through some models or methods	Models or Methods	No idea	No idea	By using lesson plans maybe	The teacher must be trained firstly then through models or methods	No idea	No idea	No idea	No idea

In view of the table above, it demonstrates that generally educators had close to zero familiarity with the idea of schooling for sustainable development. There are 7 from 9 educators who had barely any insight into the term of instruction for sustainable development. It is alluding that the term sustainable development is as yet viewed as unfamiliar by 77,7% of the instructors. Educator's misinterpretations about the idea of sustainable development likewise happens in instructor's reactions. Instructor's misguided judgment about the idea of sustainable development is displayed from the reaction of the subsequent inquiries, training for sustainable development not just incorporates information about the climate, economy and society. It means to advance sustainable living by tending to the mastering abilities, viewpoints and values that individuals hold [12]. There are 5 from 9 educators likewise have no clue about how to incorporate this idea into homeroom or through school system. It is viewed as that generally educator have close to zero familiarity with their job to advance sustainable development values and objectives through schooling, though training is the principal viewpoint to coordinate this idea top to bottom. Educator's impression of schooling for sustainable development assume a significant part in the manner they instruct and plan students for the future [13].

**The Result of Teaching Process**

In teaching process, the teacher was reviewed about their teaching process on implementation of education for sustainable development concept through developed learning model, that is ESD charactermodel. ESD character model is a learning model that has steps are collecting, consultation, analyzing, communicating and applying [14, 15]. The learning tools consist of lesson plans, students' worksheet and assessment instrument had been developed by using the steps of ESD character models. The teacher implemented these learning tools in classroom with specific matter relating to environment. The result of teaching process is shown in Table 2.

**Table 2.** Implementation of Education for Sustainable Development in Classroom

Difficulties Category	Frequencies	Percentages (%)
Very Good	4	44,44
Good	3	33,33
Low	2	22,22

Based on Table 2 above, it indicates that the teacher can implement education for sustainable development concept through ESD character model in various difficulties category. There are 4 from 9 teachers is in very good category. There are 3 from 9 teacher is in good category. This result shows that the teacher is very good learners. They can implement education for sustainable development through ESD character model very good even though they did not understand about that concept previously. Other results also show that the concept of sustainable development allows it to be applied in all three subjects with the characteristics of the material relating to the environment.

## Conclusion

In light of the examination information and result It tends to be reasoned that the term training for sustainable development is as yet viewed as odd by the educator yet most instructor can carry out that idea with explicit model. Training for sustainable development can be carried out in homeroom with explicit matter that connecting with climate.

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## **Quantitative Study on Role of Fintech In India due to Covid 19**

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### **ABSTRACT**

India has vouched for an exceptional change in the extremely fundamental existence of sympathetic in light of the upgrades occurring in the advancements. Each individual gets a considerable measure of openness to differed kinds of innovation and its arising patterns. One of the persuasive components in the Indian Monetary Area is another strange term called FinTech. FinTech adventures have highlighted colossal redesigning in overseeing monetary contributions by scrutinizing the actual presence of the conventional monetary institutional system. Further, different challenges followed by compulsion come to the mindfulness, and secrets started to look like with respect with the impacts of FinTech on the Indian Monetary System. The prior bits of proof propose that exploration disregarded the effect of FinTech on the Indian Monetary Area. This study gives experiences concerning FinTech in India and its impact on the Indian Monetary Industry. Besides, the thought is to have a more unfathomable information on changing scene of the monetary area because of headways in FinTech. An exact information has gathered utilizing the subjective technique from three different sub-sets. This sub-set incorporates - experts from FinTech adventures, specialists from monetary organizations, and end-clients of the monetary area. The review displayed that there are different variables liable for modifying the scene of the Indian Monetary Framework. Further, the outcomes showed that the reception pace of FinTech is less before the worldwide wellbeing flare-up however is extremely high and penetrative after the emergency. Likewise, the outcomes follow a positive relationship between the FinTech reception toward the end shoppers and the worldwide wellbeing Pandemic Coronavirus flare-up. Consequently, it suggests that the reception pace of FinTech has expanded enormously, which shows a more monetary consideration and development.

### **KEYWORDS**

FinTech: Financial Technology, FIs: Financial Institutions, IFS: Indian Financial System

### **Introduction**

This study starts with the exploration issue by introducing a brief presentation in regards to FinTech and its developing scene in Indian Monetary Framework. It makes sense of the motivation behind this exploration furthermore for current examinations. Likewise, it presents the examination objective to be investigated while going with the review. The extension and the construction of the postulation are eloquent toward the end. India is seeing a sensational shift and disturbance in the functional model of the various areas because of the flexible degrees of progress in innovation. Each unbreakable build has been hit or overpowered constantly cherishing innovation unfurling in a variety of various thoughts. Plus, the Uncertainties is certainly not a particular one as it has affirmed various transformations in the overseeing mandate and the working of the customary monetary framework. The light-footed mechanical progression has determined the Indian monetary industry to the advanced pipelines consistently in FinTech. FinTech is a mixture of Money and Innovation. The article will expect to acquire an impression and concentrated on additional learning on FinTech in India and its reaction in the Indian Monetary Area. The review is to see a greater perspective on the fundamental job of FinTech in helping the Uncertainties when the pandemic. Moreover, to decipher an outrageous information into where the FinTech area is presently and where it's advancing. This scientific review plans to break down the FinTech domain in India and look at the effect of FinTech

on the Uncertainties here and resulting pandemic Coronavirus. Another determinant is the segment factor for the advancement of FinTech. These days, the thousand years age is exceptionally presented to FinTech and turning into a faithful client base. Moreover, the failures of the capital business sectors are the incitements for developments that efficiently dispense with the void and criminal operations. Further, the varieties in the macroeconomic commitments of the monetary biological system are the essential component for the advancing imaginative answers for alleviate the gamble profile uncovered on the shoppers of the money business.

## Purpose of Study

In India, FinTech is one of the quickly advancing enterprises line up with the pioneering and new businesses environment. The profoundly cleaned innovation is having an impact on the Indian Monetary Industry. In any case, FinTech is dependent upon the uncommon improvements in the powerful environment that impact its customary characteristics and prompting novel models. It can get together with various methodologies of a solitary structure, like the floats in working capabilities, specialized updates, and the serving stage. It mirrors the clever level of qualities, for example, being adaptable, tough, and summed up. It has disturbed the monetary base and turned into a topic of unmistakable worry for the public authority. This article has started from the constant advancement of FinTech consent and application in India. The viability of monetary administrations and functional model of the Monetary Framework in India mirrors an adjusting disposition towards FinTech. Consequently, the thought that evoked my anxiety is to scientifically look at the FinTech domain in India and the effect of FinTech on the Indian monetary framework here and resulting pandemic Coronavirus. Further, the uplifted assumptions for researchers, academicians, and analysts in regards to restricted and uncommon writing on the fix of FinTech in India, prompts me to concentrate on the basic realities on the job of innovation empowered administrations in the Indian Monetary Framework.

## Objectives

The objective of this study are as follows:

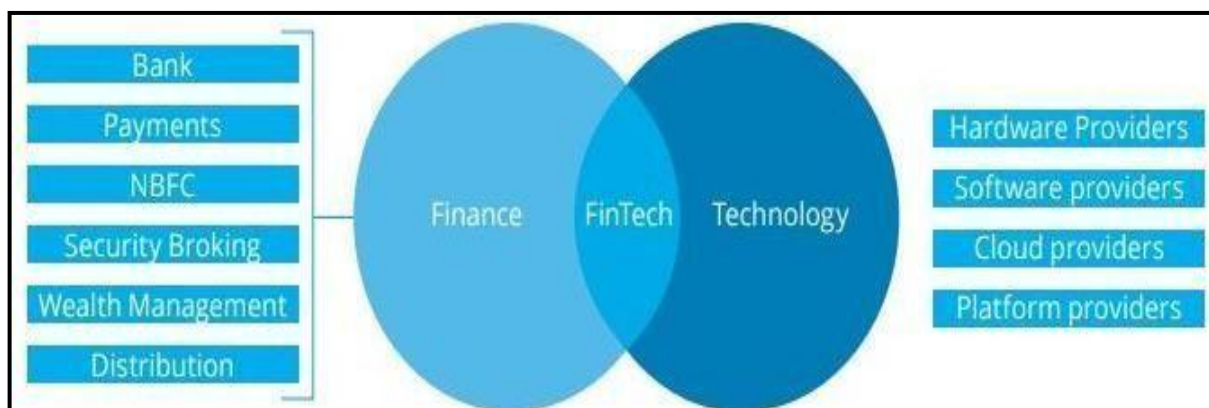
- To analyze how FinTech has altered the landscape of the traditional financial system expressly associated with India's scenario.
- To analyze the influence of pandemic COVID-19 on the adaptiveness of Financial Technology in the financial sector in India.

## Literature Review

It contains an orderly survey of the writing of the ahead of time progressed information used in this paper. It makes sense of FinTech in a more extensive perspective from the work area of respectable approvals composed by famous academicians, scientists, industry specialists, and researchers in the review space. Besides, it shows concerning Pandemic Coronavirus.

It is a signatory in India that the worldwide interest in FinTech over the beyond couple of ages is faltering. India is seeing an expansion of two times the rate inspected to different countries. It possibly concocts the new tech drifts that decrease the section hindrances for new contestants by utilizing the open-source programming and other specialized progressions. It straightforwardly enters the Monetary Establishments to reshape their cycles proficiently that prompts open-up of valuable learning experiences. Monetary innovation is typically an undertaking with the manufacture instrument that makes worth and approaches concerning monetary contributions. These contributions incorporate ventures, time, credit, and other important assets. All in all, the FinTech system is indistinguishable from the business peculiarity of making a commercial center for the clients. It includes a solid association with others in local dialects with a quick transmission of information and knowledge. The methodology of FinTech started with the advancement of

innovations that are taking up the people and creates humanoids for achieving the monetary exchanges. Be that as it may, there are open and sympathetic ramifications of using humanoids. FinTech has balances that are esteem increments for monetary administrations. The upgraded coordination of innovation for the conveyance of monetary contributions requires proper observing, organization, and order to work in accordance with the consistence and revealing norms of the monetary area. Likewise, client information security and protection go about as prime issues in the advancement of FinTech. The tech instrument empowers hearty verification frameworks to stay away from information breaks. The creative edges of FinTech have been quickly poking the monetary business sectors by soaking in the scores contrived by the conventional monetary establishments and essentially advancing client fulfillment. The scope of accessible examinations and writing sources mirrors the requirement for investigation and the ascent in revenue in the methodologies connected with FinTech and its job in the Indian Monetary Framework. Additionally, the connection of monetary productivity through FinTech and the pandemic Coronavirus is significant in India.



**Figure 1: CONVERGENCE OF FINTECH**

## FinTech Portfolio

The idea of FinTech is an umbrella peculiarity that embraces the relevance of IT advancements. It contributes towards legitimate and novel monetary elucidations to fulfill the necessities of upgrading the business strategies, cost-cut, strengthening adequacy and flexibility, and so on. The overall arrangement of FinTech involves a few unique spaces inside the domain of the monetary business. The different peculiarity of a FinTech portfolio with the different applications are as per the following

- Monetary Foundations Tech Patterns: FIs are the practical objective gathering of mechanization encountering a mechanical stir due to strengthening concern for network protection. These organizations line up with FinTech are advancing and handling the original contributions. The methodology of FinTech is expected to meet the quickly floating clients' requests and the advancement of mechanical tendencies. Additionally, these are well-suited for giving client driven monetary ideas by baking and blasting individualistic requirements. The tech empowers arrangements in the monetary organizations permits them to serve all the more proficiently while keeping up with client administrations. These arrangements are tweaked and customized by the necessities of the specialist co-op and administration recipient. FinTech makes a pervasive biological system in which clients have the ability to choose when and how to speak with the monetary organizers, can get to their particular records readily available through cell phones, PCs, ATMs, and, surprisingly, through their Aadhaar card. However, some entrance spaces, for example, web-based entertainment making dangers in the monetary tasks in view of an absence of proper expected level of effort.

- **Crowdfunding Stages:** It is one of the most reassuring segments of the FinTech portfolio. It is likewise an arising imaginative FinTech stage that incorporates propelling capital or speculation and entrepreneurs from an extensive variety of individuals essentially for novel endeavors and new businesses through a web-based methodology. The idea of crowdfunding is indistinguishable from the extremely ordinary idea of aiding a hand where a gathering helps a specific individual monetarily. These stages permit loan specialists to inject their excess assets into the proposed adventure items for looking for more significant yields. Consequently, the asset searchers are getting the subsidizing for exceptionally creating novel items. These days, there is a ton of flood in the improvement of such stages for making it helpful for the clients to get subsidizing in the profoundly impacting world.
- **Client's Resource The board:** It is a basic idea of dealing with the client's resources or ventures. Its coordination has changed the manner in which it was performing before. Resource the board works as a sub-characteristic of a speculation financier who contributes and gathers returns for clients. These days, FinTech has straightforwardly affected the fundamental peculiarity of overseeing resources. These stages permit the financial backer to exchange utilizing the customized measurements and experiences accessible to them. They can likewise follow all of their total assets from the doled out dashboards. Besides, the clients can put resources into benefit looking for incredible open doors at an insignificant exchange cost and comfort cost by using the example suggested portfolios, planned with the utilization of calculations and complex codes.
- **AI (ML):** The reception of Man-made reasoning, Machine Knowledge, and different calculations assumes a fundamental part in the monetary business. FinTech utilizes the simulated intelligence and MI codes to construct and develop programming elucidations for formulizing information and creating an AI framework. This creative programming arrangement will work with a framework to work ostensibly, connoting any order or coordinated to perform it. These are learning techniques that store novel operating codes at every single minute by processing lakhs of algorithms. These AI-enabled & MI-enabled methods eliminate the possibility of human error and are very user-friendly because of their learning traits. These systems help in developing intelligent solutions for calculating the expected returns or losses under the different scenarios.
- **Digitized Real Estate:** The digitization of real estate is highly associated with FinTech concerning smart contracts utilization for the transactions. It serves as a bridge for joining the hands of FinTech with the real estate market. The digital platforms are working as a marketplace for real estate investors and project contractors. This platform attempts to fulfill the market gaps by uniting investors with real estate sponsors and promoters. The amalgamation of the digital world and real estate is novel, but the evolution is more than just a novelty. These also assist in procuring secured loans against real estate by putting them as mortgages. It provides a new market vertical where an enhanced version of crowdfunding is envisioning. Numerous platforms are serving the facilitation of constructing and executing the smart contract for the real estate dealings that eliminates the counterparty risk.

## Importance of FinTech

India's FinTech market is presently driving ahead around the world concerning the FinTech Centers. The impact of the monetary area and its impetus capability in financial germination has improved as a worldwide topic from the most recent couple of many years. In any case, this job has gradually floated on the shoulders of the FinTech companies that work to the greatest advantage of the monetary development by diminishing the gamble and cost, for example, monetary gamble, credit

risk, exchange cost, accommodation cost, and so on. It can occur because of proficient use of IT-empowered devices and strategies, items and administrations, and so on. (Zavolokina, Dolata, and Schwabe, 2016) displays that these FinTech are answerable for the smooth working and effective development of the undertaking far and wide in the monetary area. This developing significance of FinTech in the economy has its only base from the superb working of the conventional monetary foundations that forms a biological system of creation and utilization, reserve funds and speculations, amazing money management choices, and other monetary preparation's. Further, the happenings of the FinTech domain serve every one of the potential and involved parties inspired by the monetary area of India. The monetary business looks at the inadequacies of tax assessment and guideline, pointless expense and market deviations, and, surprisingly, the general market working. These are the market blemishes that make mayhem in the monetary framework by disregarding ideal situations to be followed. Nonetheless, FinTech endeavors to make a pool of proficient instruments that guarantees the smooth progression of assets past general setting, taking care of hazard, and work with installment services. FinTech marks the expressions of appropriateness by transforming the financial landscape concerning regulatory troubles, risk aversion, and financial imperfections to support economic growth. The pervasiveness of digital technology and demographics dominance modifies the way it is operating and accessing the finance of the new age (Schindler, 2017).

### **Landscape of FinTech in India**

India's FinTech market is presently driving ahead around the world concerning the FinTech Center points. Nonetheless, there's a ton of degree for progressive and common development in the area. India had shown what itself can do as an educated country and a country of frantic turn of events. The pioneering environment of India mirrors a positive effect on the development and development of the scene of FinTech. It permits the FinTech area to turn into a crucial part of the Indian Monetary Framework by initiating and giving new agreement, client care, and monetary incorporation. As per the examination of Deloitte (Anand and Bhatia, 2017), "Indian FinTech organizations can possibly reshape the monetary administrations scene in three ways." India can possibly modify the scene in the accompanying way - (I) FinTech new businesses are probably going to decrease costs and work on the nature of monetary administrations. (ii) The FinTech business will foster one of a kind and creative models of evaluating chances. (iii) FinTech will make a more different, got, and stable monetary administrations scene. Besides, the report of Yes Bank Drive (Nagpal and Jakhar, 2018), "Fintech in India is as yet a rudimentary area", yet "the area however is developing fastly. Fintechs in India are spread equitably (21%-27%) across ideation, model, early income, and business development stages. Given the classic of the greater part of these new businesses, it is very estimable that 7% of fintech have previously turned beneficial." over the long haul, the new tech patterns are advancing each new day. The area will continuously be considered immature in view of the powerful idea of the advancements.



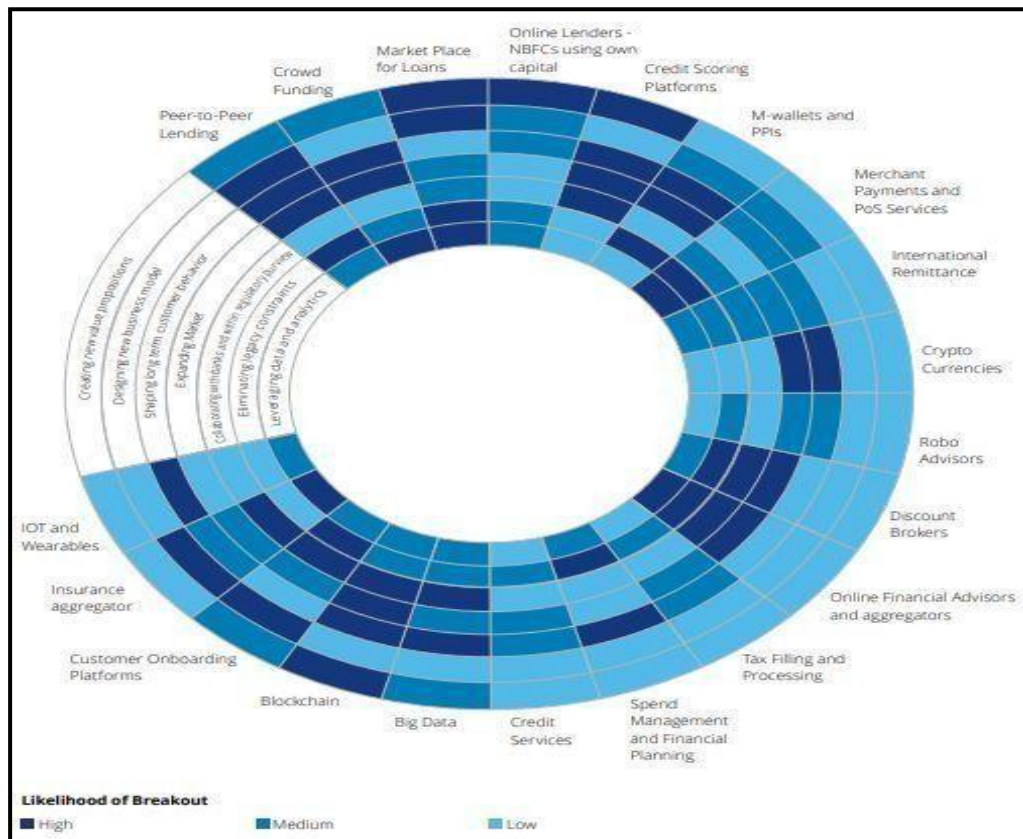


Figure 2:INDIAN FINTECH PORTFOLIO BREAKOUT

### COVID-19 and FinTech

All over the planet, the Indian economy is considered a quickly developing economy. Coronavirus flare-up has impacted the development and improvement of agricultural countries like India. The pandemic has risen faster than some other large scale financial variable in the Indian business sectors and economy. This pandemic emergency has come about at first in a downturn of the economy, and recently, into a slow financial market. In any case, Banking and Money is one of the developing enterprises during a pandemic. Be that as it may, India has arisen as a superior worldwide player in the FinTech area all over the planet. The pamphlet by (Tafti, Jariwala, Jain, and Gupta, 2020) expressed that "The continuous spread of Coronavirus has become one of the greatest dangers to the worldwide economy and monetary business sectors. To contain the effect of the Covid episode, India, in the same way as other nations across the globe, is going to a few lengths." The actions are expected to defeat the effect have by the pandemic in the Indian monetary business sectors. Too, "The unfriendly impacts of the Coronavirus pandemic are streaming down to significant areas of the Indian economy, with assembling, auto, retail, avionics and cordiality enduring the worst part of the lockdown", and the FinTech Business is definitely not an excellent one. Moreover, the episode prompts the ascent in computerized monetary exchanges because of the eccentric conditions in the midst of lockdown as there is "a lift through the Public authority, which has vowed money related help to the poor by means of direct exchanges to ledgers." Monetary administrations in India have spoke to people in general to "Go Computerized" for monetary exchanges. "There are likewise a couple of regions that are seeing an increase in computerized installments via expanded reception during the lockdown. These incorporate internet based supermarkets, online drug stores, OTT players (telecom and media), EdTechs, web based gaming, re-energizes and utility/bill installments" (Tafti, Jariwala, Jain, and Gupta, 2020). It mirrors the shift from the old ordinary to the new

computerized framework by changing the whole interior instrument. The review directed under the Bharat Incorporation Drive by (MSC, 2020) expressed that "The early piece of 2020 has been a bad dream for India. The rising instances of Coronavirus, countrywide lockdowns, and feeling of dread toward getting the infection have negatively affected the physical, mental, and monetary prosperity of individuals". The review fathomed that FinTechs in view of reserve funds and speculation portion of monetary administrations faces trouble. It occurs because of the changed feelings of the market and clients. The conclusions constrained them to changed or reshaped their general tasks. The FinTechs has likewise addressed a "No Month-on-Month" (Mother) ascend in the new client base. It has likewise lead to the absence of inflow of novel assets and subsidizing

## Conclusion

This study presents favorable information to gain FinTech degree from a financial emergency viewpoint. The discoveries and results can be commendable and pertinent in various spaces and hypotheses. Monetary innovation is certainly not another one among academicians, however "FinTech" is as yet a thrilling and generally new term. The superb component to the review is to continue from two different ways of essential and optional information to productively reply. The review uncovers that focal variable for FinTech development and its adaptiveness connection with the economy. These decisions demonstrate that FinTech's thought will relate to be the pioneer even in the second rush of Pandemic Coronavirus. The outcomes additionally uncover the premise on which customary monetary organizations need to work. The hypothesis of Advanced Darwinism is additionally appropriate to the idea of FinTech development

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## Going Ga Ga over Yoga: A Modern Trend & Approach in Education

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### ABSTRACT

Today most children at a very young age face a lot of physical ailments and mental stress. The peaceful and soothing antidote to all these problems is Yoga. Yoga has been a very important subject in Indian culture since ancient times. It is a beautiful gift for all and is especially wonderful and fruitful if yoga as modern trend in education is incorporated as a part of curriculum into the lives of children in their moulding years in schools and colleges. This paper aims to educate the society on this modern yet age old trend and also to find out parents' perspective on inclusion of yoga in the main stream curriculum of schools and colleges for the holistic development of students. Primary data from 533 odd Parents from Mumbai, Navi Mumbai and Thane Region was taken and recorded through the google questionnaire. As per the survey of parents, 300 children have genuine interest in yoga, 133 not interested and 100 of them might be interested in yoga. Inculcating the modern trend in education that is Yoga as a compulsory subject in schools and colleges will help to reduce stress, depression and anxiety levels in students, improve memory and attention span in students, mitigate absenteeism and violence and improve their immunity. Our Government is so much Pro- Yoga that a small step in this direction will take the youth of our country in the right direction and shape their future. If the youth is mentally and physically fit then the country's progress is for sure.

### KEYWORDS

yoga ,curriculum ,modern trend, youth ,moulding ,schools

### Introduction

Yoga has been a very important subject in Indian culture since ancient times. It is a beautiful gift for all and is especially wonderful and fruitful if yoga is incorporated as a part of the curriculum into the lives of children in their molding years in schools and colleges. Yoga is an art and science that deals with body, breath, mind, soul and the universe as a whole. It must be made compulsory just like any other subject like English, Science or Maths, so that students take it seriously and make yogasanas and pranayam a way of life. Yoga is the answer to many physical and mental problems faced by school and college children. It will increase their tolerance level, discipline and attention span. From time immemorial, the knowledge of yoga was imparted to young pupils in India. The same is possible now with just a few changes in the way we impart this knowledge to youngsters. The time has come that if we become innovative with the teaching of Yoga and meditation, surely, the students of schools and higher educational institutes will benefit beyond measure. No doubt Yoga is a part of extra curriculums in many schools in Mumbai and Thane region but children just don't take it seriously. So it's very important to make it a part of curriculum where they will be imparted Yoga and Meditation theoretically as well as practically. Some Indian States like Uttar Pradesh and Haryana have already made Yoga a part of their school curriculum. Most colleges in Mumbai and Thane do not have Yoga even as an extra-curricular activity and it's very important to include Yoga as a daily habit through curriculum for college students. Through this research we have garnered a very positive feedback that in all schools and colleges of Mumbai and Thane City Yoga should soon be definitely made a part of the curriculum

and not be kept merely as an extra-curricular activity. Our honourable Prime Minister Mr. Narendra Modi and our Government both stress so much on practise of yoga in our day to day lives. Incorporating Yoga as a compulsory part of curriculum is just a small step away which will benefit the youth of our country and shape their future in a very big way. Yoga and meditation when becomes a part of curriculum will be taken seriously by the child /student and slowly and gradually when they start experiencing the myriad benefits of Yoga and meditation,they will definitely adopt it as an integral part of their life. It has to be a joint effort of the Government, Educational Institutions and Parents to incorporate Yoga as a compulsory subject in schools and colleges where students are explained with real life case studies how Yoga has benefitted many students like them so that a genuine interest is aroused in the youth leading to a better society.

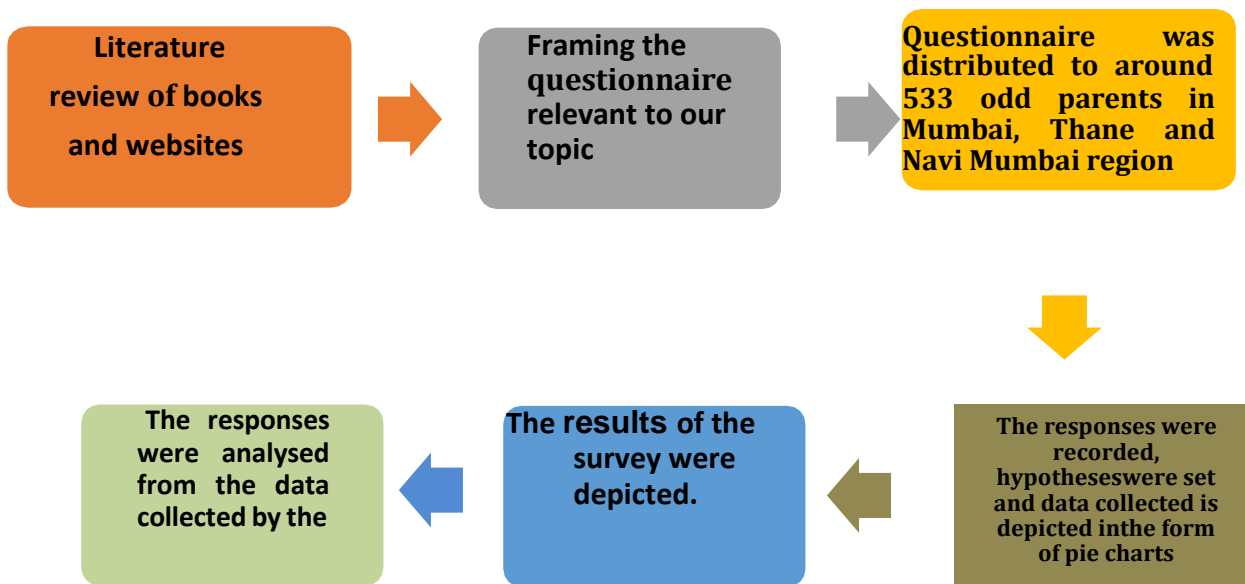
### Objectives

- To find out parents’ perspective on inclusion of yoga in the main stream curriculum of schools and colleges for the holistic development of students.
- To find out the students’ genuine interest in practicing yoga if included in curriculum.
- To educate the society about the importance of Yoga in molding the lives of our Youth.

### Hypothesis

There is association of inclusion of Yoga as a compulsory subject in curriculum in students’ holistic development.

### Research Methodology



**Step 1:** Literature review of books and various websites which are cited in the end as References.

**Step 2:** Framing the questionnaire relevant to our topic.

**Step3:** Questionnaire in the form of Google form was circulated to around 533 odd parents in Mumbai, Thane and Navi Mumbai Region

**Step 4:** The responses were recorded, hypotheses were set and data collected is depicted in the form of bar diagrams and pie charts.

**Step 5:** The responses were analysed from the data collected by the team.

## **Preliminary Work/Survey**

Primary data was gathered from 533 odd Parents from Mumbai , Navi Mumbai and Thane Region through the google questionnaire.

Please find the link for the primary survey questionnaire with close ended questions:

[https://docs.google.com/forms/d/e/1FAIpQLSfZJoHja19cnS1MrSrp24\\_sGbA27DzsOT28HOyMA-BvmQwHw/viewform](https://docs.google.com/forms/d/e/1FAIpQLSfZJoHja19cnS1MrSrp24_sGbA27DzsOT28HOyMA-BvmQwHw/viewform)

## **Real Life Case Studies and testimonies where Yoga has proved to be an elixir to school and college students**

1. Name: Gargi Sawant

Age: 14 years

Grade: 9

Place of residence: Thane

Benefits of practising Yoga since 4 months:

- “We have a lot of tests and when I have yoga in the morning it is very calming. It is a way to calm down before the test”
- “With yoga I can think more clearly ,made me more tolerant and open to different personalities and types of people. ”

2. Name: Suraj Vishwakarma

Age: 19 years

Grade: SYBCOM

Benefits of practising Yoga since more than a year :

- “I use to be more lethargic, and it has helped me to gain more energy and stamina.”
- “My focus is better.”Place of residence :Bhandup

3. Name: Ganesh Gupta

Age: 20 years

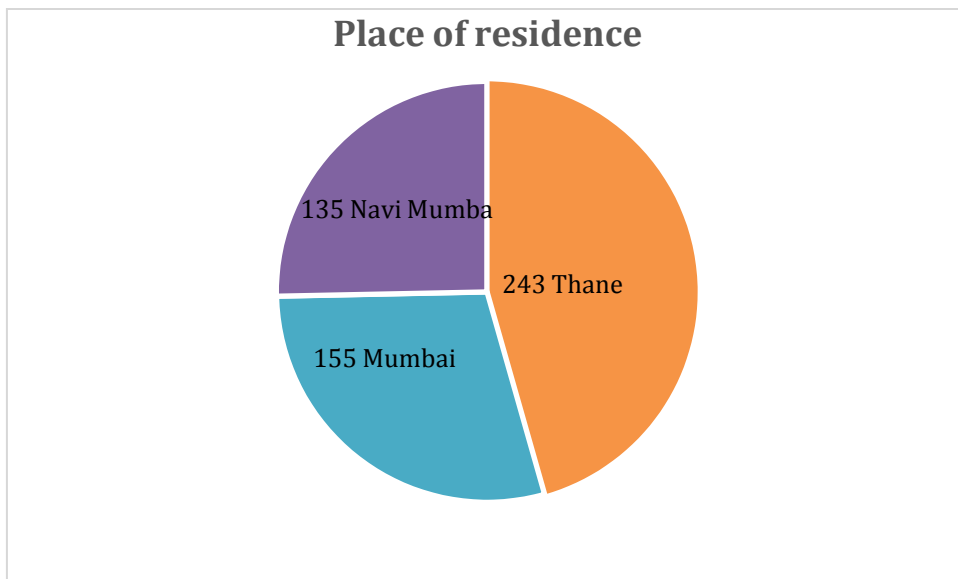
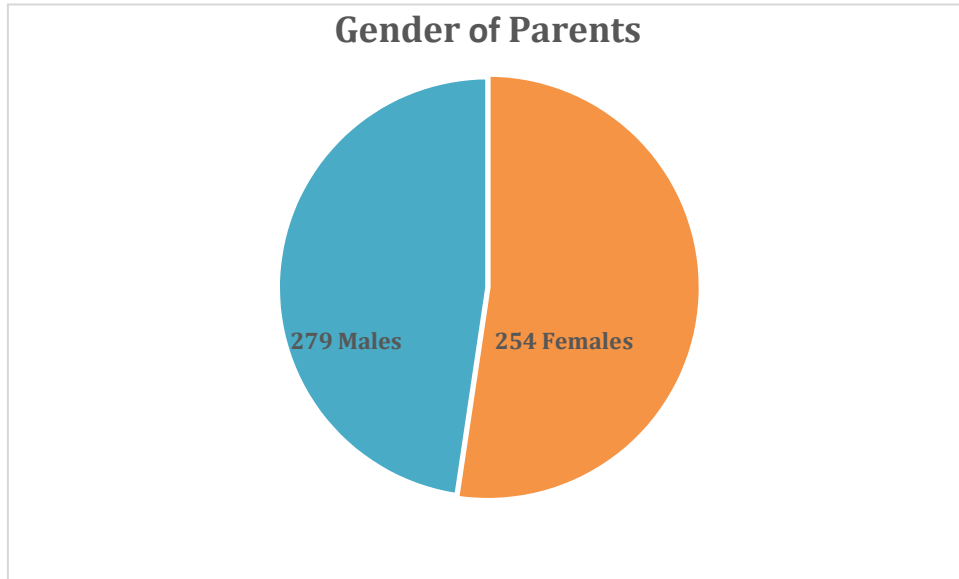
Grade: TYBMS

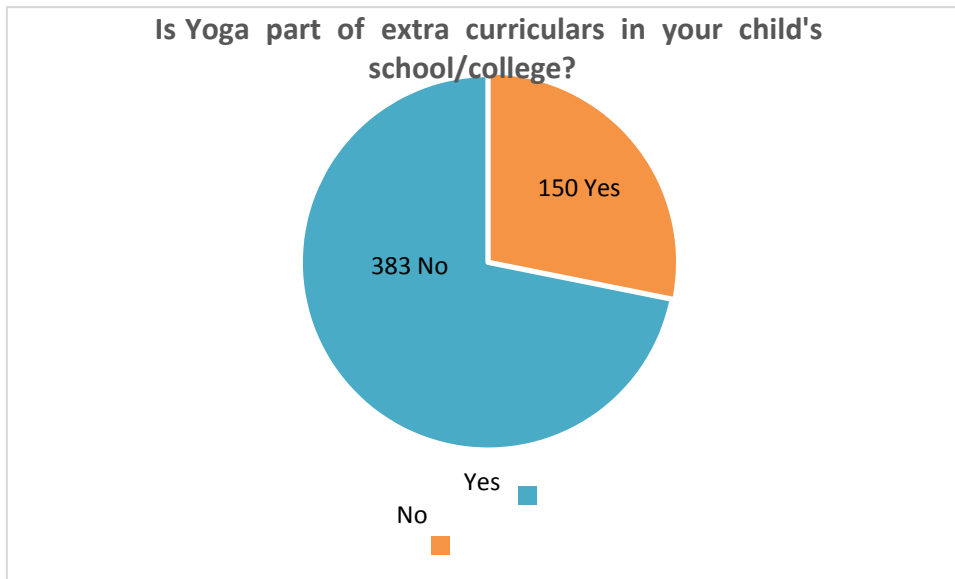
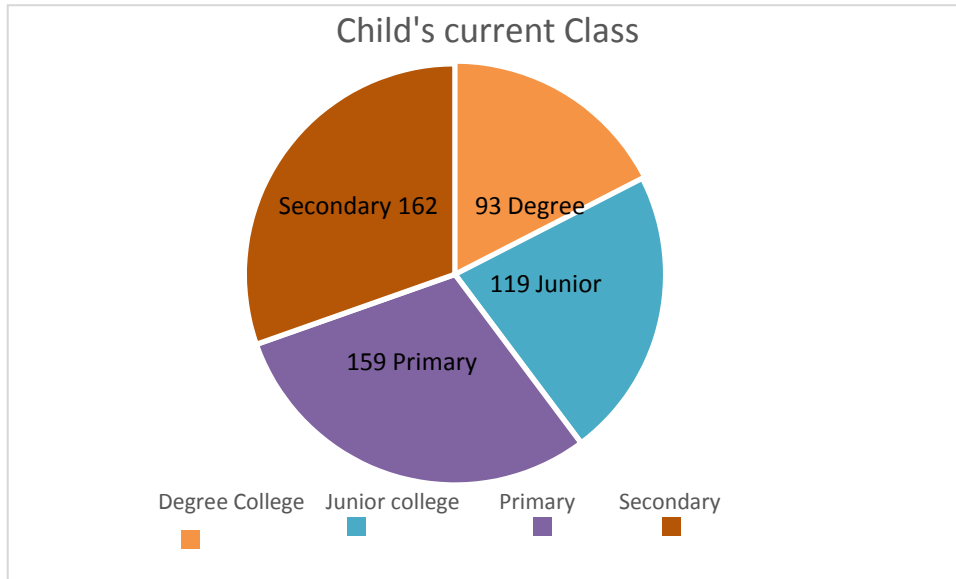
Place of residence: Kharghar

Benefits of practising Yoga since 5 months:

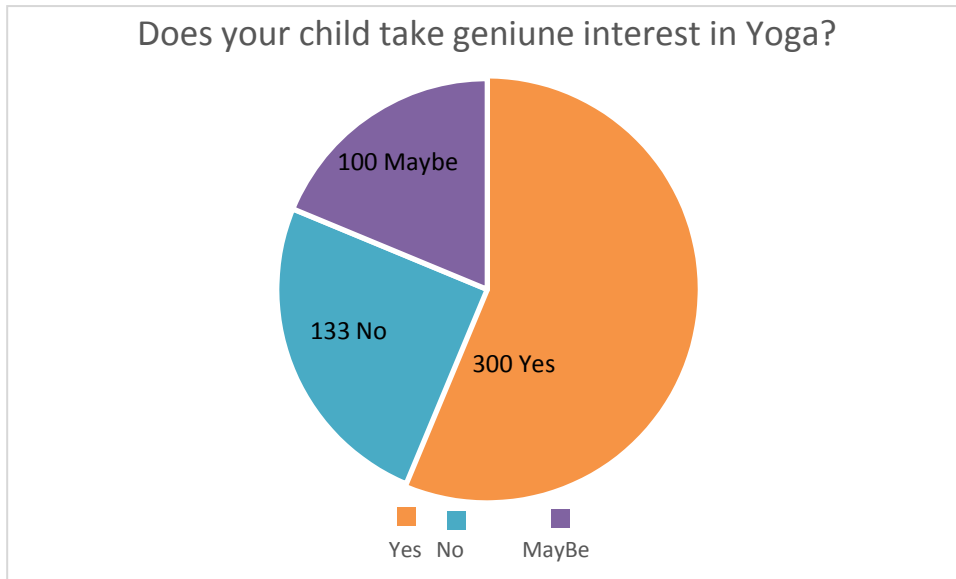
- “My urge to eat junkfood has decreased “
- “I have lost around 7 kilos by practicing Surya Namsakars and it has also helped me to calm down and take better decisions in life.”

**Primary Survey Outcome:**









**Findings**

- We took a survey of parents over google forms amongst which 279 were males and 254 were females.
- Among the total number of parents, 243 were the residents of Thane, 155 were from Mumbai and 135 from Navi Mumbai.
- The children of the respective parents are studying in the following classes:
- Primary (159), Secondary (162), Jr.College(119),Degree college(93).
- Out of the total students, 150 are having yoga as their extra-curricular activities whereas 383 do not have yoga even as an extra curricular activity.
- As per the survey of parents, 300 children have genuine interest in yoga, 133 not interested and 100 of them might be interested in yoga.
- Data Analysis shows that out of 533 respondents /parents 471 agreed that yoga must be made a compulsory part of school and college curriculum for the holistic development of child.

Comparison of response on “Do you agree that Yoga should be an integral part of the curriculum for students’ holistic development?”

**Null Hypothesis: There is no association of inclusion of Yoga as a compulsory subject in curriculum in students’ holistic development**

**Alternate Hypothesis: There is association of inclusion of Yoga as a compulsory subject in curriculum in students’ holistic development**

	Count	%
Yes	471	88.4%
No	34	6.3%
Maybe	28	5.3%

### Chi-Square test value

	Value
Chi-square	6.19
d.f.	2
p-value	.045 <sup>*</sup>

**Interpretation: Since p-value for the chi-square test is less than that of 0.05 indicates that we should reject null hypothesis and Conclude that there is definitely an association of inclusion of Yoga as a compulsory subject in curriculum in students’ holistic development.**

### Benefits to the Society

Yoga has originated 5000 yrs back from our own country India and we shouldn’t further delay to inculcate it in our curriculum and give this precious gift of health, discipline and stability to our children . Inculcating Yoga as a compulsory subject in schools and colleges will help to:

- To reduce stress, depression and anxiety levels in students.
- To help improve memory and attention span in students.
- To help mitigate absenteeism and violence in schools and colleges.
- To inculcate discipline, self confidence and life coping skills in students.
- To improve immunity, make them physically agile and flexible.

### Conclusion

We will have so many yoga experts in our country who can further train the youth and coming generations. Our Government is so much Pro Yoga so a small step in this direction will take the youth of our country in the right direction and shape their future .If the youth is mentally and physically fit then the country will progress is for sure . Country and Society at large will be benefitted. "Yoga se hi mumkin Hoga ". When all schools in Mumbai and Thane Region will add Yoga to their curriculum this will bring a meridian change in the lives of children where they will get education skills for their eco-social development. Children will be able to cope stress better and become better decision makers. They will choose a healthy life style and advocate non violence and peace in the society. Be able to face difficult situation in a much better way and be able to identify right and wrong. Just like students go for English Majors or Economics Majors in Colleges similarly as Yoga becomes a part of curriculum students can go for Yoga Majors and go for Post Grad or Phd in Yoga .It is common to find a doctor or a MBA making lots of money and living their dream life but its definitely very satisfying to choose a career that matches your soul. Unlike regular job roles, teaching Yoga is a soul satisfying experience as it allows the teacher to use Yoga & meditation as a divine tool to help mould students future, as youth is the greatest asset of any country for achieving progress. Limitations/Challenges: The challenges to ongoing practice discussed by the students included mostly physical space and time. Students are already loaded with so many subjects, so if Yoga is made compulsory then students should be made to understand about the myriad benefits of yoga on their academics, emotional and physical health .This should be a joint effort by parents and teachers in the form of case studies so that students are motivated to do yoga and not feel that they are compelled to do it.

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[www.thegoodbody.com](http://www.thegoodbody.com)

[www.timesofindia.indiatimes.com](http://www.timesofindia.indiatimes.com)

[www.mindbodygreen.com](http://www.mindbodygreen.com)

## Books on benefit of Yoga for students

Yoga education for children -Swami Nirajananda Saraswati



## The Impact of E-Learning on Students

Author's Name: Dr. Kamran Abbas Mirza  
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### ABSTRACT

E-learning is learning through Electronic devices like Computer, Laptop, Tablet, MobilePhone. E-learning not restricted to academic only, the non academic leaning also possible with the help of different videos on YouTube like Food Preparation, Hairstylist, Henna Design ,Dress design and many more. E learning was very rapidly used in Pandemic Period of Corona Virus. The teaching and learning work carried out in accordance with e learning only. If E learning method would not be available the time and year of many students would have been wasted. E learning have many drawback also like the student may suffer from many health issues like eye sight problem, problem of attentiveness, laziness and so on. Therefore e learning is important for all to understand the importance of E learning with avoidance of health issues. E learning provide platform for many students to choose career even from long distance or online learning.

### KEYWORDS

E-learning, Students, career

### Introduction

E denote Electronic, which means all type of gadget. "The word "e learning," originally used in a 1999 CBT Systems lecture, refers to a strategy for acquiring knowledge and skills through digital channels like the internet and other electronic media."<sup>1</sup> The learning will be very easy & effective if used with proper tool and channels. With the rapid changed in technology & advancement this has great impact on education also therefore its result in E- learning. It has been observed that the human brain used to remember thing if concept are seen & hear used while learning in case of E-Learning audio & visual both things are utilized. The E-learning more effective if used in a proper way at the same the E-learning have many distraction also. The E-learning have contributed in nation development & progression also. It have many advantage on students & drawback as well. The E-Learning get popularity in case of crises. The student able to clear clerical concept but not practical concept. E- learning does not require physical attendance as and when student get time they try to join the online study. Self paced study is great advantage of E-learning. as per knowledge & choice the student. "Dramatic changes in the way people across the world live, play and entertain, have changed the way people learn too. Education sector has witnessed a sea change, given the changing demographics, changing industry expectations and a brave new world of youngsters who seek the power of knowledge in transforming their lives."<sup>2</sup>

### Objectives

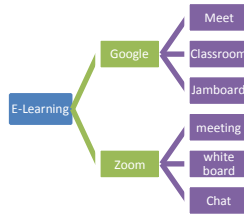
1. To understand the E-learning Concept.
2. To know importance of E- Learning.
3. To discuss in detail about the disadvantages of E- learning

### Research Methodology

1. Primary data is being collected by Degree College students for Research purpose.
2. Secondary data is also used like internet & website.

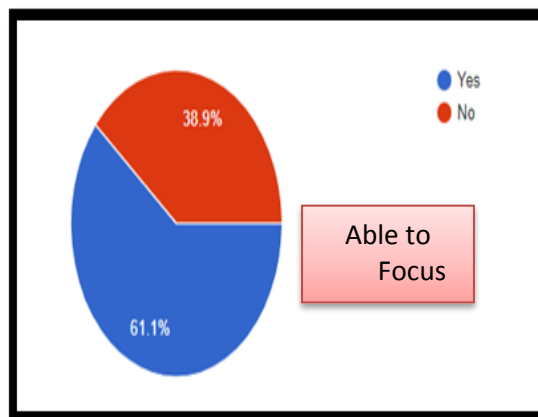
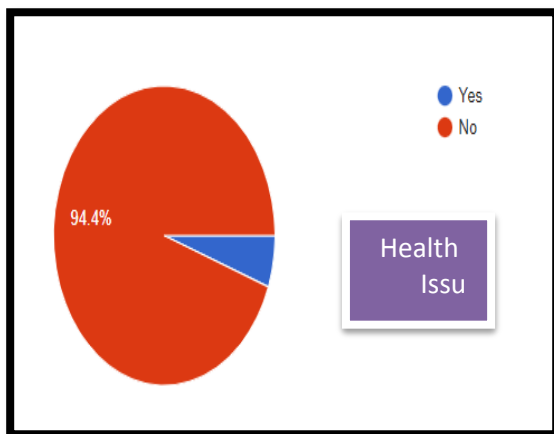
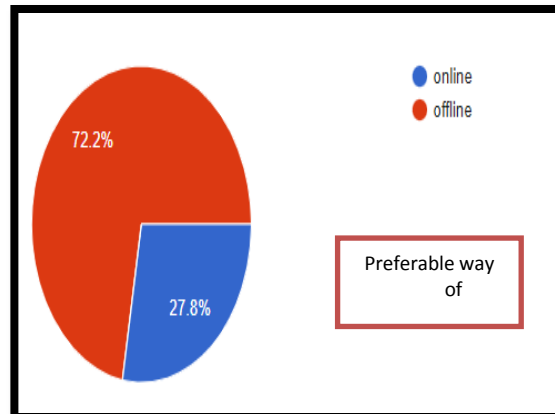
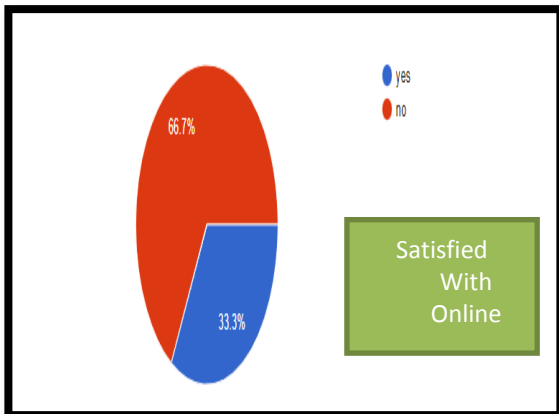
### E- Learning Concept

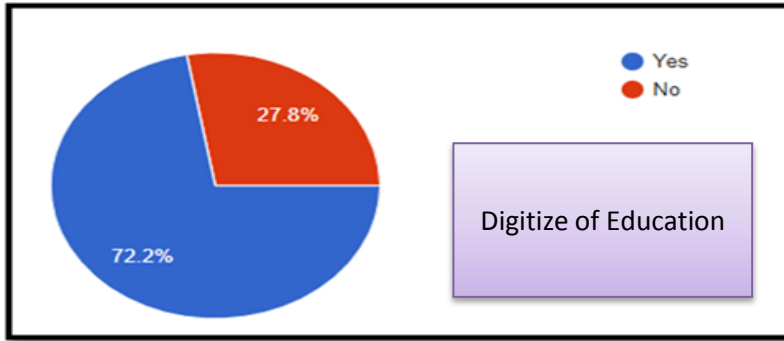
It has been a great debatable topic for all of us that E- learning good or bad. E-learning have positive or negative impact. In ancient time many of the students have to walk miles to get knowledge or education now the concept has been changed the students do not have to go anywhere with the comfort zone of homely atmosphere the student can take up any course through online or E- learning and able to get required knowledge or qualification .E-Learning Concept is very simple to understand. The teacher used online tool Like youtube,Whatsapp,google class room,Google Meet,Zoom to reach out to students at the same the students also use same tool which is define or instructed by their teacher to acquire specific knowledge or lecture once knowledge delivered by staff can be store by students & staff and it can be seen multiple number of time & get concept clear.



Many more platform available but this two mentioned in image was very commonly used by maximum staff & students. The Google & Zoom both are user friendly.

In this part of research paper the primary data will be discussed like the students who have been attended their some lecture online & switch their studies to offline when the situation has been normalized. The reason to select particular respondent that they have taken with online & offline studies so they would have given factual data.





The above studies shows the students are ready to go for E-learning but atbteh same students also reported that some time they some technical problem or may be failure of power supply.

### Importance of e- Learning

- Time saving
- Easy Understanding concept
- Self Paced
- Environmental Friendly
- Repeat of Lecture /lesson
- Promote Peer Learning

#### Time saving

Once the learner start from studying e-Learning they do not have to spend more on fees because many of the course content freely available on website even many colleges & universities ask their staff members to upload all study material at free of charges

#### Easy understanding concept

The psychological study shows that the concept & teaching if done in mother tongue would have great impact on learner even though the students chooses medium of instruction as English but they prefer to get explanation in their mother lounge which is easily available on internet .

#### Self Paced

Once learner get adjusted with E -Learning, the learner find it easy as per availability of time & convenience the learner get acquainted knowledge of their choice may be slow or fast mode.

#### Environmental Friendly

It does not include any paper to note down or write on paper therefore it saves paper.

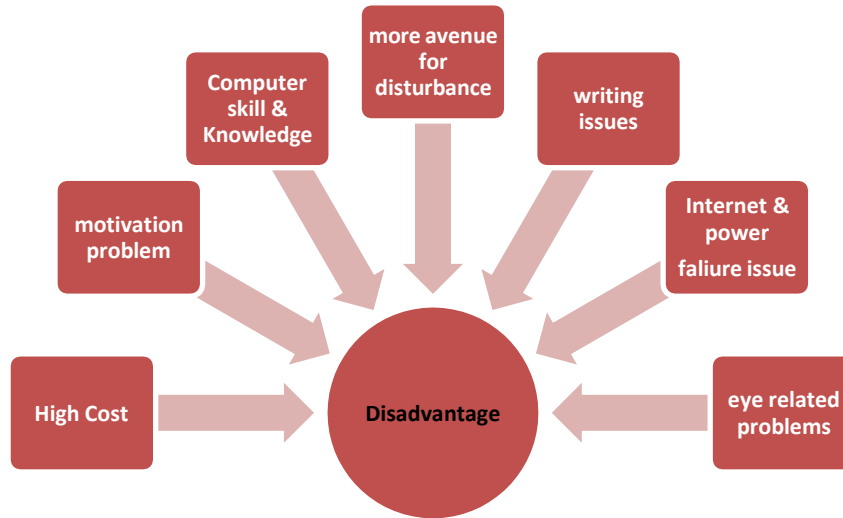
#### Repeat of lecture/lesson

In online mode of lecture if it is saved the student get it repeat by themselves as many number of time they wish to.

## Promote Peer learning

In offline mode the student may feel shy to discuss & ask doubt with their peer/class mates but in online mode of lecture the students find it easy to discuss & clear doubt

## Disadvantage of E- Learning



### High Cost

It requires learner to spend amount on purchase of Mobile Phone, Laptop, and to get connection for internet without this facility it's not important.

### Motivation Problem

In offline class/lecture everyone comes for attending lecture and acquire knowledge, but in offline lectures the student will have to have Self motivation to understand the learning concept, which may not be possible all the time.

### Computer Skill & Knowledge

Before joining online classes the students must learnt computer skill & knowledge. If students not smart enough in computer skill, the students may not be able to clear doubt how to mute, speak in online class.

### More avenue for Disturbance

Student join for online from anywhere it is not possible all the time the atmosphere push them to understand the lecture. The student just connect the lecture if not controlled by teachers they might be doing their other work. In online class they use cell & laptop many more apps like whatsapp, telegram, facebook, instagram shows notification for new message instead of focus on lecture they are curious about new messages & notification.

### Writing issues

The students who used to attend lecture online find it difficult to write for examination, they may not able to clear examination also. the writing practice would have been total gone from the students because they just read ,listen & understand.

### **Internet & power failure issues**

The internet & power failure issue are very common in most of area where the students reside, so they may not be availability of power & internet, sometime the financial situation may nit permit students to get recharge or refill internet & student's important lecture missed out.

### **Eye problem**

Constant watching mobile phone or laptop may create eye related problem if proper precaution not to be taken by student, many of the student get their spectacles in accordance with excess use of laptop or mobile phone.

### **Conclusion**

E-learning would be very beneficial for students if they use it very properly, it helps the students to continue studies but it may not give practical experience for performance. Many students may not take seriously about the E-learning. In order to connect the student with educational institution the offline learning is must. The students not only acquire academic knowledge but also learn values. Without self-motivation e-learning is not possible whereas in offline learning motivation may get from peer or teacher.

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## Climate Resilient and Sustainable Agriculture

Author's Name: Dr. Shashikant Shinde

### ABSTRACT

This research's primary purpose or aim is to present climate resilient and sustainable agriculture information. This Paper covers various factual information about the factors related to Climate Resilient crops responsible for Sustainable Agriculture in different climate-prone countries. The Study is entirely Secondary based and follows a scoping review. The Methodology used here for preparing the scoping review is Prisma Methodology. To deal with environmental challenges like drought, heat, flooding, and salinity, small-scale farmers have turned to climate-resistant crops and cultivars, as shown by a descriptive analysis of 202 publications. Drought tolerance was the most common feature in our dataset, followed by water efficiency. Following education levels of household heads, farmers' access to inputs—especially seeds and fertilizer—and the socio-economic condition of farming families, our analysis indicated that extension services and outreach were the most important drivers of adopting climate-resilient crops. About 53% of research found that factors such as race, gender, age, marital status, and ethnicity influenced whether or not climate change adaptation types or crops were adopted. It was found that a number of possible approaches and interventions could lead to a greater uptake of climate-resilient crops and a decrease in their unpopularity.

### KEYWORDS

Climate Resilient, Sustainable Agriculture, PRISMA

### Introduction

“Climate Resilient Sustainable Agriculture (CRSA)” is a beneficial strategy for addressing both the climate and food crises. CRSA proposes to fill in the gaps in current agricultural mitigation and adaptation programs by highlighting the actual preferences, wants, and awareness of farming social groups themselves. CRSA prioritizes the right to food, nature sustainability, and long-term community adaptability to diminish food anxiety at the local tier and make a contribution to an effective climate change strategy for both country's initiatives that endorse consciousness and sustainability in agricultural systems. Although agroecology holds great promise for combating climate change in the long term, wealthy countries and multilateral organizations are ignoring the field. Instead, they're promoting "false solutions" like biogas, carbon markets, and soil carbon absorption packaged under the banner of "Climate-Smart Agriculture" in order to shift the obligation and prevention burden onto poor countries and societies.

Climate-Resilient Agriculture (CRA) is a strategy that uses existing natural resources sustainably in crop and livestock production systems to obtain long-term increases in productivity and farm income despite climate variability; it differs from Climate-Smart Agriculture (CSA) that, CSA is too advanced and smart that it doesn't allow any adverse situation of climate change over ecology as well as productivity, but CRA is an inbuilt mechanism of the system to recognize the threats that need to be responded to, with effectiveness. Climate-smart means anything which is planned effectively in advance to encounter vagaries of climate change so that its effect may be minimized. This may involve avoiding stress or tolerating stress with any set of procedures. However, climate resilience is something that is capable of tolerating the stress arising out of a set of conditions. CRA includes 3 phases, i.e.

Recognition Phase: “System recognizes its adverse threats quickly.” Such threats include events such as erratic rainfall, cyclone, drought, flood, heat or cold wave, long dry spells, frost, insect and pest other threats induced by climate change. It is also known as the initial phase of CRA.

Curing Phase: “System cure itself through different adaptive and mitigative mechanisms.” Such mechanism includes conservation agriculture, cover crops, integrated farming system, carbon sequestration, direct-seeded rice, precision farming, site-specific nutrient management. It is the intermediate phase of CRA.

Sustaining Phase: “System should sustain their adaptive mechanisms over a long time.” CRA, with these mechanisms, builds itself in such a way that it can break through any hurdle that would come it's the way. It is the final phase of CRA (Debangshi, 2021)



Fig. 1. Phases of Climate Resilient Agriculture

## Objective

- To present a review related to Climate Resilient and Sustainable Agriculture
- To study the Impact of Climate-resilient crops on the Agriculture
- To Study the factors related to Climate Resilient crops responsible for the Sustainable Agriculture
- To specify factors in the acceptance of climate-resilient crops in climate-prone countries.

## Hypothesis

- H0: Climate Resilient crop has a significant positive and favorable impact on the Sustainable Agriculture
- H1: Climate Resilient crop does not have a significant positive impact on Sustainable Agriculture.

## Literature Review

(P.K, 2018) Based on “secondary data” and other details gathered from a variety of sources, this paper aims to conduct a preliminary assessment of “India's National Initiative on Climate Resilient Agriculture (NICRA).” On the basis of the available data, they attempt a brief trend assessment and conclude that India should target adequate financial investments at those states that are highly vulnerable to climate-induced shocks, which will have long-term benefits for the agriculture sector. The farmers may be able to adapt to the altering climatic conditions and their detrimental effects as a result of the strategies.

(Simarmata et al., 2021) The goal of the research is to summarize the results of the IPATBO rice intensification system and two Climate-Field Schools (CFS) in Cinganjeng and Rawapu, which are located along the Pangandaran and Cilacap coastlines. To restore the soil's health and increase rice

production, both IPATBO and CFS have adopted the Climate-Resilient Sustainable Agriculture (CRSA) strategy. CFS in Ciganjeng and Rawaapu was successful in enhancing soil fertility, increasing rice yields, and enhancing farmer capacity all at the same time. To sum up, the results show that agroecological-based approaches like CRSA and CFS can be successfully implemented to help farmers and agricultural practices become more climate- resilient.

(Fitzgerald, 2016) In Massachusetts, there is very little research on this issue. Climate change, agricultural adaptations to manage risks (climate and non-climate related), and what New England agriculture will look like in the future were some of the questions that were asked in interviews for this study. In my research, I discovered that Vermont farmers have a better understanding of climate change's causes and effects, whereas Massachusetts farmers remain upbeat and committed to their communities despite the threat of climate change. Additionally, more research in Massachusetts and Vermont is likely to assist local farmers in better considerate the effects of weather change on agriculture and how they can adapt to it.

(Peter Newell, 2019) The study analyses the democratic, financial, and governing issues that “African governments” face in implementing “Climate-Smart Agriculture (CSA)” as part of their efforts to achieve the “United Nations Sustainable Development Goals (SDGs)”. We must improve our knowledge of the various circumstances and methods by which administrations will have to traverse and deal with the unavoidable options and quarrels, efficiencies and new trade that describe attempts to concurrently incorporate these worldwide aims. We must. It provides an initial evaluation of the implications for policy and practice of the variety of approaches. A comparison of the experiences of “Kenya, Tanzania, Ethiopia, and Rwanda” in their efforts to physique "Climate-Resilient" food and farming organizations that are suitable with the “SDGs” is the basis for the analysis.

## **Methodology**

A scoping review, apart from a typical systematic review, aims to grasp all the relevant research on a given subject and minimize authorial skew. Scoping reviews provide a unique opportunity to examine the indication in agricultural fields to answer queries about what is currently known about a topic, what can be produced from emerging research to determine strategy or rehearse suggestions, and what aspects of a topic are still unexplored by researchers.

### *A. Identification Synthesis and Protocol Pre-Registration Methods*

The PRISMA renewal for systematic review (PRISMA- ScR) (Tricco et al., 2018) was followed in the preparation of this scoping review. In this framework, five steps are included: Classifying a research query; recognizing pertinent research; education choice; retrieving and plotting information; assembling, rephrasing, and presenting the findings (Arksey & O'Malley, 2005). In advance of choosing a research subject, the procedure for this evaluating analysis was published on the “Open Science Framework.”

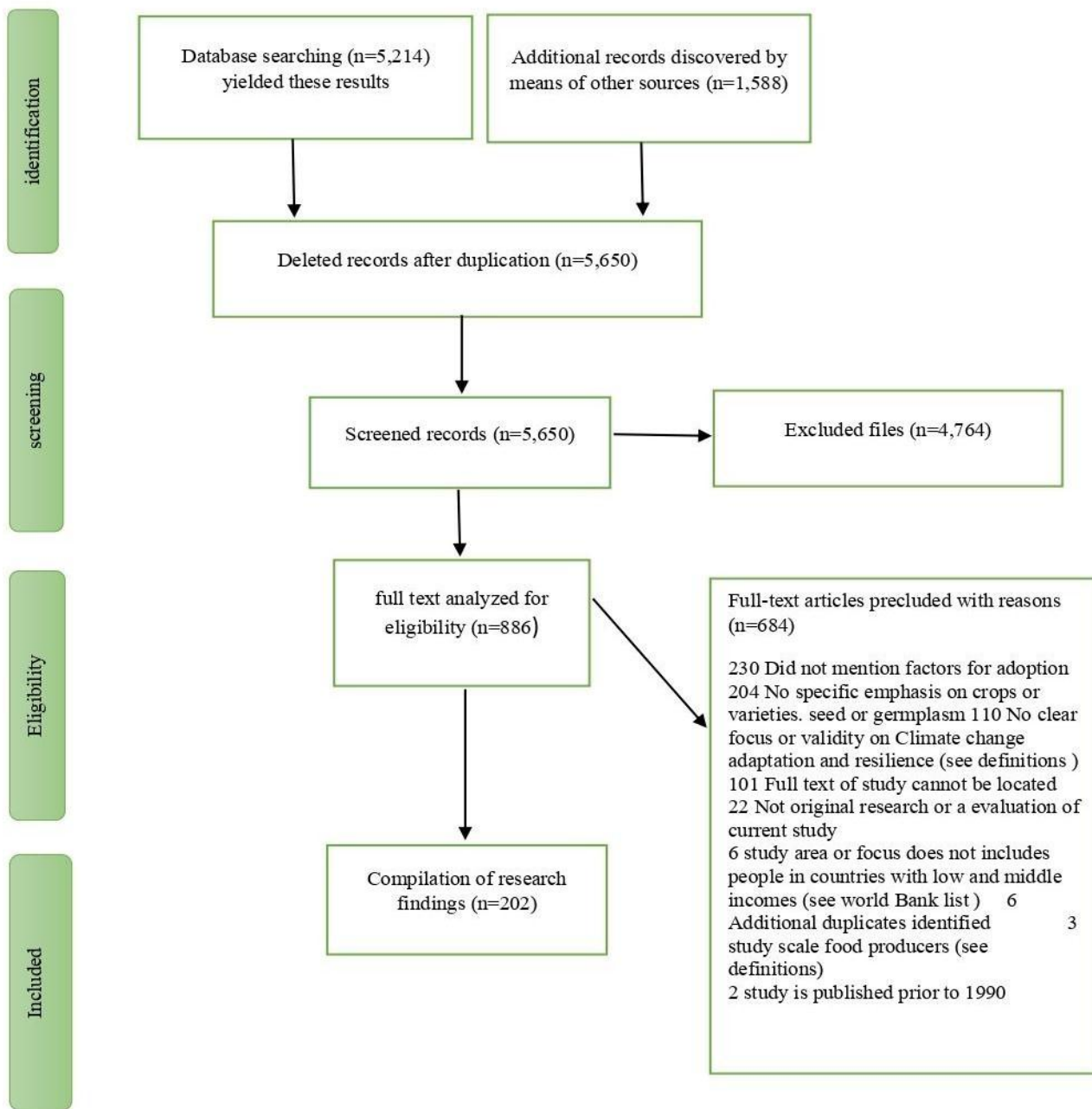


Fig. 2. Prisma Flow Diagram

*B. Research Evaluation*

The study selection process was broken down into two stages: Phase I and Phase II. First, articles were imported into Covidence, a software tool for systematic reviews, and titles and abstracts were screened by all researchers to weed out those that didn't meet the criteria for the enclosure. Two authors independently reviewed each article, and if there were any disagreements, a third author independently resolved them. Then, a single reviewer conducted a full- text screening and made inclusion decisions. The full-text broadcast included only those studies that saw all integration requirements or those whose requirements could not be developed during the topic and esoteric broadcast process.

C. Data Extraction and Analysis

The template for extracting data was created to keep track of the information and research category and background of each citation. The first step in the data retrieval process was to gather data about the paper quality, study location, demographic and socioeconomic characteristics of the population, as well as information about the crops and cropping systems. Data extraction templates were used to gather information about the factors that influence crop adoption or dis-adoption, including socioeconomic factors (Levac et al., 2010). There were a total of 29 factors and predictors chosen. Additional rater assumptions and responses were incorporated into the analysis in order to provide a deeper understanding of the findings. Raters also took note of the policies and programs described in the study to encourage the use of Climate-Resilient cropping systems. The review team tested the template for extracting data before it was used, and the authors then extracted the data. In order to make suggestions to donors and policymakers, the derived information was summarized substantively on the basis of evolving tropes. It is not typical for a scoping review to include an evaluation of study quality (Peters et al., 2015).

**Results**

“PRISMA-P” protocols for this exploratory evaluation were recorded. Title and conceptual monitoring of “5,649 citations” led to “568 full-text” screenings, with 202 papers meeting the eligibility requirements for extraction of data from the full-texts of those that did not.

Peer-reviewed journals published 189 of the 202 papers, while grey literature published 11 percent. Three studies used both quantitative and qualitative approaches in their research, with 87 mixed-method studies and 82 quantitative studies.

A. Information of Implemented of Climate-Resilient Crops

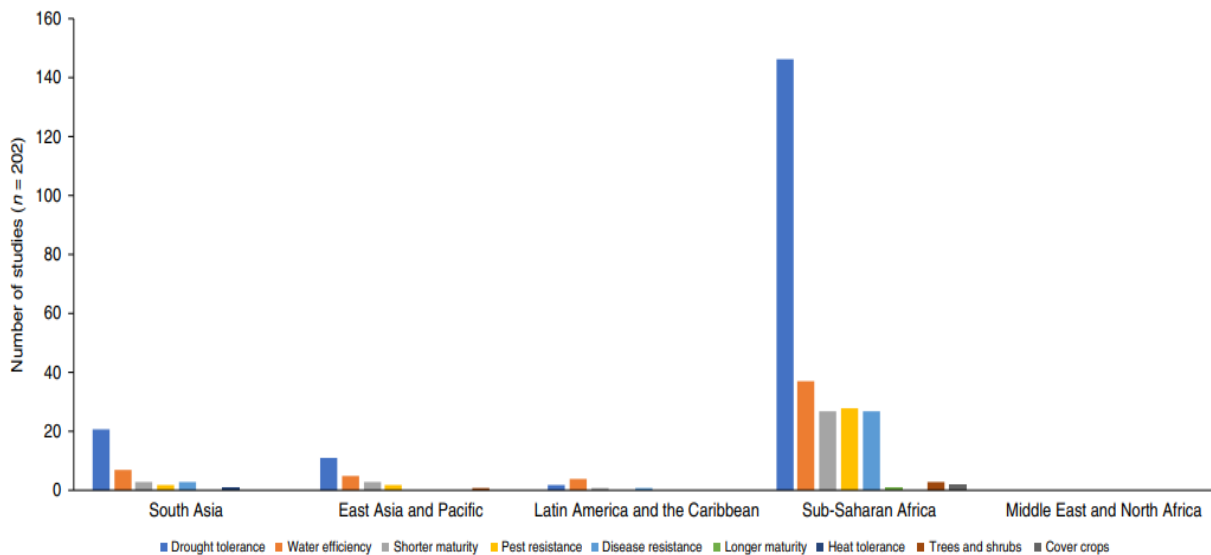
Climate-resilient harvest adoption in several countries was strongly influenced by the obtainability, efficiency, and view to agronomic adaptation services, among the 29 social and economic factors evaluated. More than half of the studies found that appropriate implementation of climate-resilient yields in emerging countries depends on the availability of extension services and public awareness campaigns.



Fig. 3. summary of the factors that influence farmers' adoption of climate-resistant crops and crop varieties

There are 29 cultural - financial factors represented in this model. The inner-circle summarizes the five broad categories. The outer ring depicts the most frequently mentioned elements within each broad section in the included studies that go into more detail. A category's prominence can be gauged by the amount of space it takes up. For the sake of illustration, only factors that were described in less than 20% of studies as influencing adoption were included in this number.

It was found that Climate-Resilient harvests and crop cultivars were accepted in order to manage abiotic pressures such as recession, heat and inundating, alkalinity, and a shorter growth period (crops that mature quickly) (disease and pest resistance). As a result of the effects of climate change and crop system sustainability, Climate- Resistant yields and crop varieties were also accepted to improve soil moisture retention, increase the quality and quantity of the soil, and reduce soil depletion (reduce the risk of food insecurity by cultivating cover crops and legumes). In the dataset, drought tolerance was the most studied trait, tracked by water competence and early integrity. As a result of climate change-induced weather variability, farmers can modify sowing dates when rains are deferred and reduce the risk of crop victims due to recession or heat surfs later in the upward season when early-maturing crops are adopted. In 32 percent of the study, an adaptation policy to Climate Change was identified as shifting planting dates.



**Fig. 4. Climate-resilient traits or crop changes that have been implemented in response to climate change**

According to the evidence, farmers rarely embrace a new yield or yield variation without making significant changes to their current practices. A number of 136 papers (67 percent) define how agriculturalists use Climate-Resilient crops in combination with other Climate-Resilient machinery, such as (CSA) strategies and preservation farming. Climate-Resilient machinery comprised tree and shrub implanting, reduced or increased livestock investment, as well as modified planting dates and irrigation schedules for various crops.



Type of response to climate change	Percentage of papers that list the response*	Examples of specific activities associated with each response to climate change
New variety planted	24%	Introduction of a new variety of an existing crop to the farmer
Modified planting activities	32%	Change in planting date, crop diversification, crop rotation and intercropping
Irrigation and water management	32%	Water conservation strategies, irrigation, micro-irrigation, water harvesting and improving drainage
Seeking off-farm work or migration	5%	Outmigration, seeking off-farm employment and diversification of activities beyond the farm
Storage and infrastructure development	5%	Crop storage development and improvement, community sharing and road building
Use of fertilizers and pesticides	16%	Use of fertilizers, including manure and pesticides, and change in use of fertilizers, compost manure and green manure
Planting trees	12%	Planting shade trees and agroforestry

**Table 1: Incorporating climate-resilient crops into larger climate-resilience strategies**

*B. Seed and Implementation of Climate-Resilient Crops*

In 73 research, the subject of seeds was discussed. More than 60% of the articles cited seed access and availability as a barrier to the implementation of climate-resilient strategies. Adoption was made easier, in part, by the existence of social networks like cooperatives and farmer organizations, as well as by having easy access to relevant information. Various social groups and methods of seed exchange or information exchange are referred to in these themes.

*C. Social Alterations and Implementation of Climate-Resilient Crop*

Approximately 53 percent of studies found evidence that communal distinctions (like gender or educational attainment or age of family head) impact the implementation of changes or harvests as climate change extenuation approaches, while 30% of studies found no evidence of such differences. Data on social differences were omitted in 15% of studies. A majority of the research that looked at public alterations and climate-resilient crop adoption found that “education (22 percent), gender (28 percent), age (24) and family size (14)” were the most important factors in the adoption of these crops and crops. There were also mentioned much less frequently of “marital status (2%) and experience (2%), revenue (6%) and access to data (5%)”. Sexist data disaggregation of household heads was examined in the papers we looked at. The sex of respondents was reported in 45 percent of studies, with 39 percent disclosures on both gender domestic heads, 5 percent reporting only on men, and only 1 percent reporting on only lady respondents. More than half of the research examined public alterations in questionnaires, but few corroborated these research results with follow-up qualitative studies to better know the social variable at play in approval conclusions (Kabote et al., 2014).

According to most research, farmers' economic and social standing has a significant impact on their decision to adopt Climate-Resilient practices. Thirty-one percent of the research focused on the socio-cultural position of growers. Several research has shown that considering the socio-economic position of growers is crucial for the monitoring of Climate-Resilient harvest innovation initiatives and their implementation and resilience in practice. This is a conclusion that has been reached (Yamano et al., 2015). Farmer's income has been linked to increased adoption in 13 studies. Access to

risk transfers (such as emigrants and insurance) and credit (such as bankloans or local society loans) increased the likelihood of farmers using Climate-Resilient harvest techniques. Agriculturalists who described limited credit were less likely to increase recent yields and more likely to nurture local diversities. As a result of a lack of cash or credit, farmers may not have the ability to purchase inputs.

#### *D. Information on the Dis-Adoption of Climate-ResilientCrops*

Some climate-resistant crops and crop varieties have been rejected by farmers; a total of 12 of the 202 papers in our evidence synthesis supported this conclusion. The most common reasons for the non-adoption of the technologies examined were that they failed to meet expectations in terms of performance or quality or diversity (8 papers), public policy (3 papers), technology issues (2 papers), staff scarcity (1 paper) and budget restrictions (1 paper). Dis- adoption was found in eight of the twelve studies to be directly linked to a crop variety's performance under stress, and four of these eight studies found that farmers' expectations were not met by the varieties' performance under stress (Fisher & Snapp, 2014).

### **Discussion**

It was the goal of this scoping analysis study to identify the factors that will lead to sustainable agriculture when climate-resilient crops are adopted in countries at risk of climate change (Rogé et al., 2014). Research into these variables may help to shape interventions that help farmers adopt climate-resilient innovations before they suffer the worst effects of climate change and inspire them to adopt the best practices that have been proven to be effective in the past (Kihupi, M. L., Mahonge, C. & Chingonikaya, 2015).

There is a clear preference for cereal crops in studies on the implementation of “Climate-Resilient” yields (67 percent). Only 1 percent of research focuses solely on “legumes”; the rest of the time, legumes are assumed in conjunction with other yields. This may be due to the prevalence of “cereals” in delicacy foods around the world, as well as prejudices toward the research of these yields and the growth of more “Climate-Resistant” crop diversities. On the other hand, this is a concerning development because many studies neglect to consider the climate resilience and high nutritional value of some of the more understudied legume/root/tuber crops (like cassava, Bambara groundnuts/beans) as well as the fact that these crops furnish more well-implemented conservational advantages than “cereals” (like improving the soil).

Climate-resilient technology adoption in “low and middle- income countries” is influenced by agricultural extension and public awareness campaigns, according to a scoping review of fifty percent of the research involved in the appraisal. Farming continuation connects farmers to the most recent study and interacts in translation training to make complicated knowledge more approachable to agriculturalists. Such systems, such as weather forecasts, can serve as early warning mechanisms that have been shown to help farmers deal with and adapt to changing climates more effectively. Farmers are better able to plan their farming activities, such as the types of crops they will plant, after having direct exposure to climate prediction data (for example, a weather station run by the community). Farmers can use knowledge and collaboration technology-influenced implication and weather services to make timely decisions and adapt their farming practices thanks to these new digital technologies. Using these methods, implication services could be made more effective while also being less expensive. In developing countries, farmers' access to training and expert advice on new technologies has been restricted because of a lack of funding for implication services. Partners like telecommunications organizations and non-institutions will be crucial in the future.



New agricultural technologies aren't widely adopted because farmers are wary of taking risks. An experienced farmer's response to a climatic shock is to take precautionary measures in order to avoid massive losses and to maximize management under average or likely situations, but not adverse conditions. Crop and cultivar selection and improved production technology are two examples of these ex-ante preventative strategies.

Climate-resilient technologies are more likely to be accepted by growers who have experienced climatic shocks rather than those who have never experienced a climatic shock. Farmers' earlier understandings of "environmental shocks," such as scarcity, have been shown to have an impact on the acceptance of "Climate-Resistant" yields and yield diversities. To a greater extent, farmers who have had more exposure to climate change shocks will be more receptive to climate-resilient technologies in general. When farmers in Ghana's Brong Ahafo agro-ecological zone were asked why drought-resistant varieties were adopted by 15 percent, they said that recession shock was the primary factor.

Our synthesis shows that farmers' education levels have a favorable connection with technology implementation, and this is also true for the adaptation of climate-resistant crops. More knowledgeable heads of domestic are more likely to receive and view knowledge about new innovations in a short time than those with less education; educational attainment was measured and reported in 49 percent of the studies. Every "additional year of schooling in Zimbabwe," there was a 5 percent increase in the production of early-maturing sorghum varieties and a fifty-two percent decline in the manufacture of "traditional sorghum diversities" in favor of new diversities.

The reviewed literature has a major flaw in that most studies only included women as household heads. Women who live in men's domestic heads have different views than women who live in domestic woman heads. Since most women are confined to homes where men are in charge, their opinions and experiences are largely unheard. Drought-resistant maize adoption was less likely among new, poor women in Uganda who were domestic heads, whereas wives of male domestic heads had an impact on their husbands' fields. Few research has looked at how dynamics within households, gender roles, and relationships influence adaptation choices. As a result of a lack of attention to gender dynamics and climate-resilient seed adoption in the home, as well as findings and suggestions are skewed because women's issues and viewpoints are underrepresented in literary works.

Seed strategies in many countries concentrate on reinforcing official, global seed processes that are based on diversity publish methods, seed credential initiatives and seed businesses for allocation. These kinds of seed processes are still problematic for farmers to obtain and evidence from this initial planning shows that reinforcement "local seed processes" is crucial. Multiple sources of "Climate-Resilient" harvests and species can be found in local seed systems via social networks, including rootstocks and enhanced seed. For this reason, framework sensitivity is essential for seed processes, as it is for nearly all aspects that influence the implementation of "Climate-Resilient" harvests and diversities.

We found that many of the factors that influence adoption are context-specific, so the most effective interventions are those that are specifically tailored to the environment and cropping system of the target population. It was common for studies to find seemingly opposing or contradictory (both pleasant and unpleasant) impacts of the various acceptance determinants. Individual characteristics such as gender, age and educational attainment all had an impact on the decision to use "Climate-Resilient" innovations in perspective and oftentimes opposing manner, liable on conversing environmental, strategy and domestic variables that were at play. For example, there are 13 studies that show both positive and negative effects on adoption based on the age of the adoptive family. As a

result of their experience, social media, and income, aged growers may be more probable to implement new innovations than younger ones. "Climate-Resilient" innovation and forecast information may be an exemption to this pattern, as these impacts arise to supersede perspective implementation. There is no one-size-fits-all solution for climate-resilient crops and crop varieties, and initiatives are doubtful to advantage all climate-vulnerable farmers equally. This study found that climate-resistant crops were noted in a large number of papers, which supports this finding.

Farm climate resilience is critical for food security and improving rural communities' livelihoods, particularly in "countries and communities" that rely on "local crop production" to establish domestic wage and attain regular appropriate caloric consumption and healthy diet. Climate-resilient crops can be more widely adopted, and the effects of weather alteration on rural societies in emerging countries can be reduced by better understanding the factors that influence crop adoption and dis-adoption. Following in-depth training of household heads, growers exposure to components, particularly "seeds and fertilizer", and the socioeconomic identity of agricultural families are the most significant antecedents of the acceptance of climate-resistant crops, according to our examination of data. Building climate change resilience necessitates the use of cropping systems and in many cases, farming systems. Most climate-resistant crops and varieties are adopted as part of whole-farm and "Climate-Smart Agriculture Strategies", according to the findings of this scoping review. Under "Climate-Smart Agriculture", multiple complementary strategies help farmers figure highly strong and feasible farming systems that can reply to tremors related to weather change as well as other farming tasks. In comparison to more holistic, transdisciplinary approaches that consider the tangible, individual, and sociocultural situations of the focused agronomist or agricultural community, single constituent intervention programs or initiatives are less probable to achieve extensive implementation and advancement in "resource-poor farmers" elasticity to weather change.

## Conclusion

Changes in agriculture are likely to be widespread because of climate change. Climate change's impact on agriculture needs to be thoroughly examined, but the data that has been collected thus far is incomplete. To better understand the effects of climate change on agriculture, more experimental research with a wider variety of crops is required. A more resilient system, decentralization, participatory research, and breeding networks are all things we need if we want to keep ecosystem health and services in tact in the face of uncertain or unpredictable conditions. As more stakeholders and scientists become more involved, it becomes clear that trade-offs with other goals and effects on agricultural crops are important considerations to be kept in mind. Agriculture in India will benefit from climate change, according to the paper. Diversification may or may not be relevant to a land-sharing strategy, depending on the time and space scales being considered.

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## **Indian Education System - a big Thought Process - part of BHARAT EK MAHASATTA**

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### **ABSTRACT**

Indian Education System is a Thought Process, a Multidisciplinary Education system has a great vision to be a major part of Bharat-Ek-Mahasatta. Man is mortal, but thoughts are immortal. Indian Education system is a distinct system, which interprets everything in its own way and in its own style. But it is an ultimate truth that multidisciplinary system objected by phrase Jack of all is Master of none. COVID like situation teaches us that how negativity is also important. So objective of my submission is to emphasis more on negative points and suggest the pre solutions to avoid any cruelty of post rectification, which is bad, so, instead precaution should be taken before hand.

### **KEYWORDS**

Multidisciplinary Education system: Many subject one class

Thought Process: Step-by-step analysis of subject

Jack of all Master of none: knowledge of different types of work but not competent in single one

### **Introduction - An Example**

I came across news that a 14 years school child had precisely learned 400 Articles of our Constitution.

Oh! I made a mistake in counting. It is not 400 but it is exactly 395. For many like us, it is difficult to even remember and count it and on the other hand she knows everything by-hearted.

It raised many questions in my mind and increased my curiosity about how it happened.

Is it a miracle?

Or is it God's gift?

Or is it her passion?

What is it actually?

It really teaches us that nothing is impossible for man and also enlightens that 'Man is mortal, but thoughts are immortal' and 'practice makes the man perfect'.

### **Participants – Key-players**

Whether it is theory or practical both are important to enrich the educational vision. The following are the supporting factors for enrichment of our Education system – as a Global ideal.

-Educational Autonomy

-Specific provisions of Constitution of India

-Real Sovereignty of Constitutional Supremacy.

The multidisciplinary education system suffer from (2) main drawbacks

a. Half Knowledge (Here, Half Knowledge means lack of Practical knowledge)

b. Jack of all is Master of none

**Formula (Now):** Multidisciplinary Study = Basic certified compulsory knowledge provided by school and colleges + optional Practical or conceptual knowledge gathered from other sources.

**Formula (Suggested) :** Multidisciplinary Study = Compulsory Practical or conceptual knowledge must be certified knowledge provided by school or colleges + Optional basic certified knowledge provided either by Institution or Institute or with the help of NGOs alike or by sharing with NGOs alike.

## **Discussion/Conclusion**

However, following are the obstacles and big challenges for enrichment of our Multidisciplinary Education system as Global ideal

-Half knowledge is poisonous

For example, in Media Trial the knowledge spread by media based on practical knowledge is easily accepted by viewer as truth only for the reason lack of practical knowledge in depth of viewers. This should eradicate by conceptual education at earliest.

Therefore, school and colleges has to teach the learner media trial as advance learning and just leave introduction of media as part of basic learning.

-Half knowledge can be easily misused

For example, it is observed that the political peoples are succeeded in easy misuse of practical knowledge only for the reason lack of practical knowledge in depth of the victim.

Therefore, school and colleges has to teach the learner reforms and regulations of political sphere and just leave introduction part of basic learning.

-Half knowledge can incline spirit of gamble

Due to bad evidential value for and about misuse, the perjury and gambling are increasing day by day.

Therefore, the certified provision has to define evaluation of the evidential value.

-Half knowledge easily leads to misinterpretation

Habitual misusers track the students by leading and lending misinterpretation.

Therefore, the certified provision has to define the aggrieved form of misuser liabilities.

-Half knowledge is dangerous

A chain of misuser is build up constructive power easily and further misuser promote huge group of misusers and it is further leads to formation of synthetic groups and white collar misuser groups.

Therefore, the certified provision has to define the hard-core misuser liabilities.

-Half knowledge sponsors corruption

For all corruption half knowledge is root cause.

Therefore, the certified provision has to define strict nature of liabilities on misuser.

-Half knowledge and subsidies

The half knowledge easily subsidies at all layer without any classification and colour.

-Half knowledge and rebates

The half knowledge easily used by bullies as source of investment to gain handsome returns.

-It promotes and vitiates basic roots

Last but not least it promotes indiscipline in every form and polluting the basic roots of human disciplinary system.

Therefore, the certified provision has to define group liabilities on misusers.

Even after fruitful fulfilment of above suggestions, the point of completion of course may challenge for half knowledge drawback (here half knowledge means lack of basic knowledge). So here query is what about those learners, who want to learn introduction or basics leaved by school and colleges. For the same my suggestions are as under:-

Make a certified provisions that institution or institute has to teach the learner everything needed for complete the course through their own sources, which are specifically not covered by the school or college. The institute has to take the help of the sources of NGOs and other recognised bodies of university or by use of the sharing method.

We need to accept the challenge to eradicate all these drawbacks before presenting our Educational system as part of Mahasatta (Mahasatta here means a Super Power). Only solution to this is that introduce at root level of study more and more practical approach, certified discipline and socio-disciplinary literacy, which is 5<sup>th</sup> advance type of literacy. Why and how we adopt it, already presented and explained in detail hereinabove. A Constitutional committee should be established at common platform to eradicate the above problems.

Last but not least it is impossible to arrive at a zero educational system where educational structure needs to be neutral and qualities of learner is an important aspect.

The ethical story of Arjunaa and Eklavyaa are suitable examples of zero educational system, where one could be excellent learner as product of different educational system and proves approach was became an important indeed.

So it is crystal clear that all the objections hereby resolved amicably, which are either raised by uni-disciplinary educational system against multi- disciplinary educational system or vice-versa. However, in modern era zero educational system is impossible but I believe that if we succeed in pre-eradication the above challenges amicably and peacefully our Education system becomes global ideal.

I wish to conclude my submission with a small set of lines that we will succeed to achieve global recognition if we eradicate the above drawbacks successfully by using 5<sup>th</sup> sense of literacy i.e. socio disciplinary literacy.

## **References and Acknowledgement – A Fact File**

To understand the importance of my topic and remedies I faith and believes on following fact file reproduce here as under:

“India has the highest number of voters than any other democratic country in the world. For this reform taken by Indian Government such as reducing the voting age from 21 to 18 is a great importance. This gave higher youth of India to participate in the political sphere. Due to this new political parties are emerging with active support of young population. They represent various needs of the public and compete in the political sphere. This reforms have strengthen Indian Democracy.

Till 1990's in the post independent period the political era was known as 'Single Dominant Political System'. Indian politics was control by Congress it had majority in most of the States in India. A challenge was given to this system by other small parties by adopting coalition Government.

Coalition type of Government was experimented by both BJP and Congress. There was a belief that coalition government causes instability. But after the coalition parties had successfully ended the era of Single Dominant Political System, it was proven that coalition parties indeed stable.

In India 25% seats in loksabha are reserved for Women. Some State including Maharashtra have increase this reservations to 50%.

Policy of Reservation of seats is especially for them who are deprived from various facilities like education opportunities etc. For this Government reserves some seats for this deprived classes under policy of reservation of seats in Government sectors such as Government Schools, Government Jobs etc. Schedule Caste and Schedule Tribes get this reservation.

Movements are important for any nation because it presents various problems of the local public to the government and suggest them to compulsorily take necessary measures against it. In India movements like farmers movement, tribal movements, labour / workers movements, environment movements, consumer movements, movements for securing prejudice and self-esteem and other social movements are of great importance.”



## **Cross-Cultural Management at Workplace: Suggestions to Overcome Diversity**

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### **ABSTRACT**

“Cross-cultural” was included into official policies in the 1970s in various nations due to the rationale that varied from country to country. In this era of globalisation, the biggest challenge organisations face is cross-cultural management. Cross-cultural management is the practice of leading people from various cultural backgrounds in the same workplace. One of the various ways that people may identify with a certain group is based on their gender, sexual orientation, race, ethnicity, age, etc. An organization’s culture often determines how diverse its workforce is in terms of culture. While an organisation might benefit greatly from having a diverse staff, there are also many potential challenges. Managers in organisations must use diversity as a potent tool to increase organisational success. The growing demands for managing a diverse staff are a result of the continued expansion of worldwide business. Multinational corporations face cultural issues that require a synergistic strategy of national cultural elements and leadership style. The purpose of this study is to shed light on cross-cultural management, the fundamental problems associated with it and suggestions to overcome these problems.

### **KEYWORDS**

Cross-Cultural Management, Workplace, Organisational Culture and Diversity.

### **Introduction**

Cultural aspects significantly contribute to unseen obstacles. Businesses should concentrate on removing the imperceptible hurdles to cross-cultural contact as a result of ongoing globalisation. It is crucial to remove these obstacles in order to improve the workplace environment. Also, this will open up possibilities for the organization’s growth and enlarge its geographic scope. When people from different nations, races, ideologies and regions of the world come together, many major issues may arise. Working in a multicultural team presents numerous difficulties, conflicts and arguments. The performance of the individuals and the entire company is somewhat impacted by these difficulties and disputes. Businesses must come up with a way to improve communication in a multi-ethnic environment. Effective cross-cultural communication is essential to avoiding conflicts and achieving business goals by allowing people from different cultural backgrounds to communicate with one another. A company must comprehend the obstacles that stand in the way of good cross-cultural communication and find ways to get over them. Before puberty, when a person is young, they acquire the majority of their culture. Humans have the capacity to assimilate cultural norms from their cultural surroundings at a young age, including from their parents, siblings, playmates, etc. As a result, culture facilitates people’s smooth integration into a given society. A culture can function at particular levels:

- i. National scale: It is well known that national cultures vary at the unconscious value level, values that are learned during childhood and that these national cultures are stable; any changes that take place later on are practices that leave the underlying values untouched.
- ii. Organizational level: Organizational cultures vary in terms of practices, which are somewhat controllable and can be characterized as being superficial. Within the same nation, these organizational cultures vary from one company to the next.



- iii. Occupational level: This type of culture exists between national and organizational cultures; entering a profession like teaching necessitates the social values attained in conjunction with organizational practices.
- iv. Gender level: There is what might be referred to as a men’s culture that is distinct from a women’s culture and gender differences are acknowledged within the same culture. Men and women can technically perform the same tasks at work, but there are differences in how they react to the symbols that are used.

The following table shows a difference between “individualist culture” and “collective culture”:

<b>Individualist Culture</b>	<b>Collective Culture</b>
1- Transaction oriented (focus on results).	1- Relationship oriented (focus on process)
2- Short-term gains	2- Long-term growth
3- Emphasis on content (facts, numbers, ratios, statistics)	3- Emphasis on context (experience, intuition, the relationship)
4- Independent	4- Interdependent
5- Competitive, decision-driven	5- Collaborative
6- Direct, explicit communication	6- Indirect, circuitous communication
7- Personal accountability	7- Protection of face
8- Private offices	8- Open office plan
9- Linear time, impatient	9- Flexible time, patient

Figure 1: A summary of individualist and collective cultures.

Source: adapted from Guide to Cross-cultural Communication.

## Literature Review

Overall, our research makes the following distinct contributions. First off all, according to Hofstede et al. (2010) and Rowley & Ulrich (2014), management is not a universal concept and is influenced by cultural differences. The recent recession in few countries has served yet another reminder of how interconnected the world is and how urgently we need new theories and approaches to cross-cultural learning (Li, Mobley, & Kelly, 2013; Rhee, 2010).

The fundamental values, attitudes, beliefs, and behaviour of the people are reflections of the cultural influence on management. Managerial ideologies and attitudes, tech transfer and even government-business ties can be impacted by culture. In addition, culture influences how people think and act. (Hodgetts and Luthans; 1994).

A growing number of researchers have tended to adopt a more Eastern perspective, using art-based approaches to discuss business issues, despite the prevalence of using western scientific methodology to build management theories. Due to the lack of Asia-born management theories, scholars have been urged to incorporate traditional Asian philosophies such as Confucianism, Daoism, or Buddhism into HRM practices (McElhatton & Jackson, 2012). This is because the lack of Asia-born management theories may impede the development of cross-cultural learning between the West and the East.

Due to the variations in cultural contexts, many academics have acknowledged that the current US-biased HRM models that predominate the literature may not always be sufficient to meet the needs of workers in other countries (Hofstede et al., 2010; Rowley, 2003; Teagarden, 2010).

## **Barriers to Cross-Cultural Management at the Workplace**

High Context culture mostly relies on the particular programme of people's cognition to communicate information, such as many oral traditions, unspoken beliefs and generally accepted patterns of behaviour in society. In contrast, Low Context culture emphasises the rationality-based goal and logic, chooses the reasonable method, transmits information clearly through language and views implicit expression as imprecise thinking or a lack of civility. (Myron W. Lustig, 2001)

i. **Miscommunication:** The biggest obstacle to management in a multicultural environment is miscommunication. People from various cultural backgrounds, whose values and beliefs differ, frequently experience this. The differences between the various cultures produce a high level of anxiety and uncertainty, which leads to miscommunication. Throughout their entire tenure, the misunderstanding that has arisen as a result of worry and uncertainty has persisted.

ii. **Communication:** For diversity programs to be successful, perceptual, cultural and linguistic barriers must be removed. Confusion, lack of teamwork and low morale are the results of ineffective communication of key goals. This results in the barrier to the management of diversities in the organisation and leads to various disputes among the employees.

iii. **Norms and Roles:** Norms are the culturally defined guidelines that define what behavior is appropriate and acceptable. Every culture has its own set of standards for what constitutes acceptable and appropriate behaviour. People who work in multicultural environments frequently act inappropriately because they are unable to comprehend the norms of the other culture. Different roles are given to men and women, children and parents/guardians, husbands and wives in a particular culture. These roles differ from culture to culture, and there can be many instances of role violations in a multicultural team. As a result, there is an increase in anxiety and management is disrupted.

iv. **Resistance to change:** There will always be employees in the organisation who will not accept that their workplace's social and cultural composition is changing and they will resist changes. We have always done it this way mentality stifles innovation and impedes advancement.

v. **Values and Beliefs:** Everyone has their own set of values and beliefs. All person's beliefs and values in a globally connected working community are influenced by his or her culture. In order to communicate effectively, the person should be aware of the dominant cross-cultural belief and value.

vi. **Stereotypes:** Cultural stereotypes magnify or overgeneralize how we view people, which makes us more anxious. Every person projects a stereotype onto other people or groups of people. In most cases, stereotypes are the result of ignorance or fear of the group being stereotyped. These stereotypes are the primary causes of discrepancies in opinions regarding the other culture.

vii. **Cross-cultural theory:** The idea that multiple cultures can coexist peacefully and fairly in one nation, as opposed to just one. It is the acceptance or promotion of various ethnic cultures, applied to the demographic make-up of a particular place, typically at the organizational level, for pragmatic considerations and/or the sake of diversity. Schools, businesses, neighborhoods, cities or countries are examples.

viii. **Ethnocentrism:** It is the idea that our own culture and group behaviours should be used as the benchmark for all other groups. Unintentionally, our own cultural experiences lead us to believe that our culture is unique. The level of anxiety rises as a result of this ethnocentrism. Anxiety levels at

work are directly correlated with ethnocentrism. Due to ethnocentrism, multicultural team members experience many difficulties.

### **Suggestions to Overcome Cross-Cultural Diversity at the Workplace**

Cross-cultural sensitivity, cross-cultural awareness and cross-cultural ability are the elements that enable orderly cross-cultural management. This aspect needs to be improved in order to provide people with the tools they need to understand the differences between different cultures. An individual would be able to understand self-concept, neutrality and self-possession through the development of cross-cultural management.

The following techniques could be used to increase cross-cultural competence:

i) Imparting knowledge of cross-culture: Employees must acknowledge and accept that there are cultural differences, values, beliefs, perceptions and interpretations differ from person to person. Employees should receive basic cross-cultural training to help them understand other cultures at work.

ii) Language training: One of the most important issues when it comes to managing a multicultural workforce is undoubtedly language. Fluency will vary from person to person even if you have a common working language. Even proficient non-native speakers may find it difficult to understand what is being said because native speakers may find it difficult to adjust their messaging. Anyone who is more likely to interact with foreigners should receive proper language instruction.

iii) Mutual benefit policy enforcement: Organizations should insist on mutual benefits for all cultural groups at work. Employees will experience a win-win situation while receiving benefits comparable to those of employees from other cultures.

iv) Provide opportunities for equal employment: By employing cross-cultural management, no discrimination in hiring, compensation, promotions, terminations or any other workplace procedure is entertained. A workplace that values diversity is created by providing equal opportunities for all employees as part of your cross-cultural management strategy.

v) Identify and resolve cultural conflicts: There are differences in the ways that co-workers from different cultures interact and communicate with one another. These differences have the potential to turn into conflicts when they are combined with the pressure and stress of work obligations. When this happens, the conflict is to be settled soon to avoid negative outcomes, including potential legal action.

vi) Encourage two-way communication: Effective cross-cultural management is hampered by many other reasons apart from language. Working with employees who are overburdened, demotivated or disengaged for a variety of cultural, emotional or psychological reasons is another challenge. However, managers can foster fruitful employee relationships within diverse teams by encouraging two-way communication and ensuring that the teams have access to the necessary resources to voice their opinions.

vii) Create safe and secure environment: Every employee should feel like they belong to the company they work for regardless of their background. By creating safe spaces for conversation and interaction at work, employers can encourage empathy among their team members and encourage them to give their all on the job.

viii) Spend on team-building exercises: The concept of cross-cultural management can be applied to team-building exercises like the traditional ice-breaker games. These activities can be used to encourage unstructured conversations that can enhance team engagement and collaboration at work.

## Conclusion

In conclusion, it has been discovered that there are cultural differences between the various cultures. The communication between individuals from various cultures is impacted by these differences. Due to the large number of businesses that must operate in various regions of the world, people are exposed to various cultures that they must learn about and adapt to. As a result, many barriers could arise; communication barriers are brought on by cultural differences. These obstacles will prevent effective communication.

A particular gesture may occasionally be interpreted differently in two cultures. For instance, in American culture, nodding denotes comprehension of what is being said, whereas in Japanese culture, it denotes listening to what is being said. Therefore, we can get past obstacles if we understand intercultural communication. People are able to adapt to cultural differences, despite the fact that they exist. For instance, expatriates whose jobs require exposure to completely different cultures become accustomed to the new culture, integrate into the system, and accept the status quo. This necessitates having what is referred to as cultural intelligence, which aids individuals in overcoming challenges brought on by cultural diversity.

Many businesses are managed outside of their home countries, as can be seen in management. For instance, two French corporations with branches in numerous foreign nations include Orange for communications and Lafarge for cement, where the top management is French and the rest of the workforce is local. Naturally, in such a situation, managers adapt to the new culture and are able to deal with their employees even though they come from a different culture.

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## A Study of Investment Behavior of Working Women in Thane Area

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### ABSTRACT

Savings is the amount left after making all the expenditures from the income earned. Savings contribute a major share as household investment in the GDP of the country. Investment has now become a choice as multiple avenues are available. As time progressed, women started working & there was change seen in their employment prospects. With experience they learned the balance between family and work life. With this they not only became self-sustained financially but also started multiplying the income earned. Gender differences were seen in investment behavior of men & women. Various factors were responsible for these differences. The main objective of this research is to study the investment behavior of working women. The research involves study on awareness of various investment avenues like Bank deposits, life insurance, postal services, mutual funds, real estate, gold, etc. It also involves various influencing factors affecting the preferences & perceptions of the working women in the Thane area.

### KEYWORDS

Investment, working women, investing behavior, influencing factors

### Introduction

Savings is a leftover amount after spending wants from the income earned. This unused amount is multiplied leading to investments. Investment leads to capital formation not only for an individual but also for an economy as a whole. The household sector occupies the major place in case of savings. In India, 29.31% of GDP is household savings. Individuals from every income group, be it the poor of the poorest or rich of the richest, save. These savings can be converted into investments. Every individual wants to multiply their income to fulfill not only their basic needs but also to fulfill their unlimited wants. However, the range of expenditure may vary for every individual. Some may save more by curtailing their expenditures or vice - versa. It is very important to maintain the balance between savings & expenditure through which the rate of investments would be higher than expenditures.

Investment portfolio is nothing but a bunch of financial assets which an individual may create for themselves. It may include avenues like Bank Deposit, Insurance, Postal savings, Life insurance, Shares, Bonds, Debentures, Gold, Chit Funds, Mutual Funds, Real Estate, etc. The level of awareness for these avenues may vary individually depending on the source of their awareness. Many get the information for avenues from their friends & family, through the internet, newspapers, magazines, Brokers, financial advisors, banks, etc. Investment purposes also vary as per the requirements at every stage of life. Some might invest for health care while others for children's marriage, education, for buying their dream house or even for a world tour. People working in the private sector especially invest for their security after retirement. Depending on the requirements of the investors, the plans, duration & frequency of investments are affected.

While investing, the factors like risk bearing capacity or income stability, security, liquidity, or even tax benefit, have a major impact on investment behavior of working women in the area. This study undertakes to determine the investment behavior of working women in the Thane area.

## Literature Review

Rekha G & Vishnupriya, (2019), it studied the investment pattern of working women in coimbatore city. They studied various factors influencing investment decisions of the respondents through both primary & secondary data. Their study highlighted that there was a significant difference in investment decisions among employees belonging to various occupations & the most influencing factor for investment decision was 'children education'.

Amsaveni M & Nithyadevi M, (2018), in their research studied the investment pattern & level of attitude among working women towards investment avenues. As per their findings the most influencing factor was profitability among the other factors like liquidity, prestige, stability, transferability & speculation.

Venkatesh G C & Suryaprakash Rao B K, (2018), in their research studied the investor's perception towards investment portfolio. As per their findings, investor's choices on investment decisions are the same among both men and women.

Kaur J & Arora N (2018), in their research studied the investors perception & preferences towards mutual funds as an investment option. As per their findings, the most working women preferred investment in mutual funds due to higher returns in growth fund schemes.

Jisha V G, (2019), in the research studied the perception & investment patterns among the working women. Their main objective was to study the factors influencing savings & investments among working women. The findings of their study stated that Safety of funds was given priority by the investors while making investments.

R. Harini & Dr. R. Savithri, (2021), in their research studied the investment behavior of working women. Their finding revealed that annual income of the working women influences their investment preferences & the respondents considered investment in shares as the riskiest avenue followed by chit funds & real estate.

## Objectives of the Study

1. To study the level of awareness of various investment portfolios
2. To study the various investment preferences amongst working women.
3. To rank the most preferred investment portfolio considering the risk factor.
4. To study the influence of income on investment patterns.

## Hypothesis

1. H<sub>0</sub> (Null Hypothesis): There is no association between income & investment preferences among working women.

H<sub>1</sub> (Alternative Hypothesis): There is an association between income & investment preferences among working women.

2. H<sub>0</sub> (Null Hypothesis): There is no association between age & investment preference among working women.

H<sub>1</sub> (Alternate Hypothesis): There is an association between age & investment preference among working women.

## Scope of the Study

The research is based on study of investment behavior among working women. It includes their awareness & preferences amongst various investment avenues. This research can be useful for working women to understand and get awareness about various investment avenues.

It may also benefit the consultants to understand the investment behavior and their perceptions towards investment patterns to further guide them as per their requirements.

## Research Methodology

This descriptive & analytical study is based on both primary as well as secondary data. The primary data was collected from 120 respondents through a structured questionnaire. The secondary data was collected through various journals, publications, reports, research paper, websites, etc. The data has tried to assemble the data from working women of all the age groups, various income brackets working in various occupations.

## Tools & Techniques Used for Analysis

The statistical analysis carried out for the study is done by using Ms - Excel.

The statistical techniques applied are simple percentage analysis, & Regression Correlation.

Analysis & interpretation of data have been presented in the form of tables & pie- charts.

## Limitations of the Study

1. The responses for the study are limited to the Thane area only.
2. The major constraint was felt in case of time & resources.
3. The study is based on perception of working women only.

## Research Analysis of Data

A) Study of the awareness level of various investment portfolios:

**Table 01: To study the level of awareness of various investment portfolios.**

Investment portfolios/ Level of Awareness	Fully aware	Aware	Neutral	Not Aware	Fully not aware
Bank Deposits	29	11	3	0	1
Insurance	15	14	10	5	0
Postal Savings	14	15	11	3	1
Life Insurance	15	15	9	4	1
Shares	13	13	14	2	2
Bonds/ Debentures	7	10	11	14	2
Gold	15	16	8	3	2
Chit funds	1	6	15	15	7
Mutual Funds	16	9	11	6	2
Real Estate	6	9	17	8	4

**Source: Primary Data**

Table 01 indicates that 29 respondents were fully aware about Bank Deposits whereas there was no such respondent who was not aware of Insurance.



B) Study of various investment preferences amongst working women.

**Table 02: Investment by respondents in various portfolios.**

Investment Portfolios	No. of Respondents	Percentage
Bank Deposits	27	61.36
Insurance	7	15.9
Postal Savings	18	40.9
Life Insurance	15	34.09
Shares	26	59.09
Bonds/ Debentures	4	9.09
Gold	16	36.36
Chit funds	1	2.27
Mutual Funds	21	47.72
Real Estate	11	25

**Source: Primary data**

Table 02 shows that 27 respondents have made their investment in Bank Deposits while 18 respondents have invested in Postal Savings & only 01 respondent has invested in chit funds.

C) Study of most preferred investment portfolio considering the risk factor.

**Table 03: Preference of investment portfolio considering risk factor**

Investment portfolios	Very High Risk	High Risk	Low Risk	Very Low Risk	No risk
Bank Deposits	5	6	18	9	6
Insurance	5	7	19	10	3
Postal Savings	2	6	23	4	9
Life Insurance	4	10	16	8	6
Shares	22	12	8	1	1
Bonds/ Debentures	12	19	9	3	1
Gold	5	12	13	6	8
Chit funds	18	9	10	4	3
Mutual Funds	11	15	13	3	2
Real Estate	11	11	13	5	4

**Source: Primary data**

Table 03 shows that 22 respondents prefer very high risk by investing in shares followed by chit funds & Bonds & Debenture, Postal Savings, Insurance & lastly no risk by investing in Gold.

D) Study of impact of income on investment preferences of working women.

**Table 04: Influence of Income on Investment preferences.**

Investment portfolios/ Income Groups	Rs. 0- Rs.20,000	Rs. 20,000 - Rs.40,000	Rs. 40,000 - Rs. 60,000	Rs. 60,000 & above.
Bank Deposits	6	16	1	4
Insurance	0	5	2	0
Postal Savings	4	11	2	1
Life Insurance	4	7	1	3

Shares	4	8	3	2
Bonds/ Debentures	0	2	1	1
Gold	5	10	1	0
Chit funds	1	1	0	0
Mutual Funds	3	13	1	4
Real Estate	3	6	2	0

**Source: Primary data**

Table 04 indicates that the 06 respondents within income range of Rs. 0 to Rs. 20,000 preferred Bank deposits as their investment portfolio, 16 respondents within income range of Rs. 20,000 to Rs. 40,000 also preferred Bank deposits investment portfolio, 03 respondents within income range of Rs. 40,000 to Rs. 60,000 preferred Shares as investment portfolio, & 04 respondents of income range Rs. 60,000 & above preferred Bank deposits & Mutual funds as investment portfolio.

E) Study of influence of age group while taking investment decisions.

**Table 05: Influence of Age group on Investment preferences.**

Investment portfolios/ Age Groups	18 years - 25 years	26 years - 40 years	41 years - 60 years
Bank Deposits	5	17	5
Insurance	0	5	2
Postal Savings	2	12	4
Life Insurance	1	10	4
Shares	3	11	2
Bonds/ Debentures	0	3	1
Gold	1	14	1
Chit funds	0	1	0
Mutual Funds	3	13	5
Real Estate	1	6	4

**Source: Primary Data**

Table 05: It indicates that the respondents from age group of 18 to 25 years are influenced with Bank Deposits, respondents from age group of 26 to 40 years are influenced by Bank Deposits as well as investment in Gold, respondents from age group of 41 to 60 years are influenced with Bank deposits & Mutual Funds.

**Table 06: Result of Relationship between income & investment preferences among working women.**

Calculated Value	Critical Value	Degree of Freedom	Level of Significance
25.99	40.113	27	0.05

The critical value of the problem is more than the calculated value at the degree of freedom of 27 & 95% level of confidence. Since the critical value is less than the calculated value, the null hypothesis is accepted & alternative hypothesis is rejected. It can be concluded that there is no association between income & investment preferences among working women in Thane area.

**Table 07: Result of Relationship between Age group & investment preferences among working women.**

Calculated Value	Critical Value	Degree of Freedom	Level of Significance
10.02	40.113	27	0.05

The critical value of the problem is less than the calculated value at the degree of freedom of 27 & 95% level of confidence. Since the critical value is more than the calculated value, the null hypothesis is rejected & alternative hypothesis is accepted. It can be concluded that there is an association between Age group & Investment preferences among working women in Thane area.

## Findings

1. Most of the respondents are aware of investment in Bank Deposits, followed by Mutual Funds & Gold.
2. The research reveals that Bank deposit is the most preferred investment portfolio by working women followed by shares & investment in postal services.
3. Women from 18 to 25 years mostly prefer bank deposit, 26 to 40 years prefer Bank deposits as well as gold as their investment portfolio, while respondents from age group of 41 to 60 years prefer Bank deposit & mutual funds as their investment portfolio.
4. Women with income group up to Rs. 20,000 mostly prefer bank deposit, Income group of Rs. 20,000 to Rs. 40,000 prefer Bank deposits, mutual funds & postal savings as their portfolio whereas respondents with income group of Rs. 40,000 to Rs. 60,000 prefer investment in shares & postal services, whereas respondents with income above Rs. 60,000 would prefer investment in Mutual Funds, bank Deposits & Life insurance.

## Suggestions

1. More awareness needs to be created by bankers & other financial advisors
2. Less inclination is seen towards share market & mutual funds so awareness should be created.

## Conclusion

Working women in Thane area tend to prefer investment in Bank deposits, followed by investment in Gold, Mutual Funds, Shares, Postal services, Insurance. and very less people are aware of chit funds which reduces the preference towards this investment portfolio.

Women find investment in Real Estate, Life Insurance, & chit funds not worth investing due to lack of liquidity & security less capital appreciation & taxable portfolios & risky return policies.

More awareness can be created for such investment making sure the investors are aware of both the benefits & risks involved while investing in such portfolios.

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## **Adaptation of Human Resource Management to New Environment Post Covid-19**

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### **ABSTRACT**

The paper is totally based on the secondary data which discusses on Covid-19 impact on Human resources Management and the latest trends coined by the 'New Normal HRM' where the Negative and Positive role which lead to Human Resource Management globally.

### **Introduction**

A Covid-19 has not just been a medical or a scientific virus but it also had a psychological impact on Human being. Covid-19 has brought shift in many aspects of professional as well as personal life.

Majorly, there has been a negative impact on individuals personal as well professional lives. Many individuals had to lose their jobs and many start-ups had to close down their business and lay off their employees as they were unable to manage their human resources and technologies with the changing environment due to Covid-19. Lockdown and government restrictions forced new businesses to shut down their operations

However, on the other hand, it has also played a very vital role in many new unexplored areas of Human Resource Management throughout the world. A major shift of traditional Human Resource Management to Digital Human Resource Management was developed Globally for better Management which coined the new term of "New Normal" Digital Human Resource Management.

### **HRM Change for betterment Acceptance- Negative Role**

Where before Global Covid-19, developing country like India was getting in Shoes of Digital India in all terms to boost it Economic as well as Social Management faced very hard acceptance to the Sudden hit of Pandemic in Country where the whole country being locked for many days. where Human Resource Management for major organised sector was on Offline Mode whose sustainability depended only on Online mode which was very difficult at initial stage for all the sectors of industries. Everyone from Superior to Subordinate have to get themselves adjusted with this mode where many problems were faced to get effective HRM in Organisations. Which resulted in many such negative impacts like:

1. Ineffective and insufficient Technological resources
2. Ineffective Communication system
3. Ineffective Control and Management system
4. Imbalance in Professional and Personal life
5. Health Issues - Psychological and Physical
6. Global and National Economic Crisis effect on HRM
7. Unemployment due to Many reasons
8. Job Layoff, etc.

The above impact of Covid-19 on Human Resource Management has not just affected India but many countries Globally. Where Human Resource pre Pandemic was working only on office Desktop

Computer System majorly, due to lockdown lost their total access to the system which carried the data to be worked, where companies to sustain their organization had to input on the Work from home system development to all employees which was because very few organizations were ready with technological resources change which also created many insufficient communication system because very few houses in India had Strong Home Internet connections. As the entire system shifted to an online Work from Home system there was a loss of 100% Control and Management system from Human Resources which slowed down the productivity of employees. It also created many health issues not only Physical but also impacted the people psychologically as the working hours were disturbed to 24/7 availability of employees which also lead to exploitation of Human resources which lead to stressful workload and also getting adjusted to Work from home by keeping balance in personal and professional life.

As all the countries locked themselves to save them from Covid-19 which lead to total pause on some sectors like tourism, service, some manufacturing organisations and the many unorganised sectors. which lead to National Economic Crises in the country which impacted global Unemployment problem.

### **HRM Change for betterment Acceptance- Positive Role**

As the covid-19 pandemic hit the country not for just days but for almost 2 years which brought not only negative impact but also lead to positive developmental changes globally for better human resource management. The organisations which sustained the pandemic with adapting the changes 'New Normal' shift to online mode of managing their human resources. This shift of work from home has resulted in many positive impact:

1. Global Connectivity
2. Integrate, Inclusion and diversity
3. Technological advancement to create Human resource management
4. Motivation
5. Better Workplace and Health Safety
6. Protecting and Investing in Human Resource
7. Reskilling
8. Strategic Acquisition of talent, etc.

As an organization, the present and future depends on the Human resource which leads to success. Post pandemic globally all economies are settling by overcoming the negative impacts to positivity which has led to global connectivity advancement of all Human resources in spite of geographical borders by integrating, including and diversifying human resources under one umbrella of development. Where many companies have invested in more technological development of human resources to cope with these types of problems in future. It has also played a crucial role for placing importance on workplace and health safety of human resources which also helps employees in balancing the personal and professional life by providing adaptable working conditions and hours.

Reskilling is the new requirement created for strategic new and old acquisition of talent in human resources globally. Overall all these positive approaches have overcome many challenges throughout the pandemic for all the organizations in Management of their human resources.

Global Connectivity: Many organizations continued work from home culture post covid-19 as this has helped the organization to hire resources from any corner of the world. Some organization shifted to hybrid working culture environment where employees had to come to the office for few days a week and they can do work from home for rest of the days of the week.

## Conclusion

Some challenges created new developments in human resource management by both aspects of Negative and positive to overcome this unprecedented Covid-19 with New acceptance of the Changes for better management in organization. Also be future ready to tackle these types of challenges for all human resources and to overcome all negative aspects which have impacted the globally.

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## Globalization of the Indian Organic Product Industry

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### ABSTRACT

In India, there has been a fundamental changes post pandemic as consumers began to buy more organic products as a preventive health measure. Organic product means product which is made under system of agriculture where chemical fertilizers and pesticides are not used. This sector impacts GDP growth positively. It generates export earnings. India has the potential to become a global leader in organic market. The India organic food market size reached US\$ 1,278 Million in 2022. The objective of this paper is to examine the development of Indian organic products in the global market by using secondary data.

### KEYWORDS

Organic product, demand, export, opportunities.

### Introduction

India is second large country in farm outputs. Natural farming or organic farming is not new concept for India. Farmer were rely on cow dung, compost etc. Now days, consumers are more attentive to their health. They prefer to eat nutrient content and quality of food. Due to these concerns, they have gradually shifted to organic product. Organic product includes - fruits, vegetables, and grains, dairy products such as milk and cheese, and meat.

#### Other reasons for the demand for organic products -

1. Eco-friendly - Organic farming improves a good soil structure as well as water holding capacity. It helps to conserve the soil.
2. Health and well-being - People with allergies to chemicals, preservatives, and food items prefer organic products.
3. No antibiotics and drugs in the animal product - Animals are raised organically i.e. no use of antibiotics or growth hormones.
4. High biological quality - Organic products can preserve for a long period.
5. High nutritional value - Organic product have antioxidant properties.

### Current scenario

According to APEDA, total **9119865.91 ha (2021-22)** area is under organic certification process, out of this **4726714.74 ha** is for cultivation and remaining means **429151.17 ha** for wild harvest collection. Among all the states, Madhya Pradesh has covered largest area under organic certification followed by, Maharashtra, Gujarat, Rajasthan, Odisha, Karnataka, Uttarakhand, Sikkim, Chhattisgarh, Uttar Pradesh and Jharkhand. According to the Research Institute of Organic Agriculture (FiBL) and the International Federation of Organic Agriculture Movements (IFOAM) Statistics 2022,



## Major exports of organic products (past three years)

SR.NO	Country Name	2019-2020		2020-21		2021-22	
		Exported Qty.(In MT)	Value (In USD) million	Exported Qty.(In MT)	Value (In USD) million	Exported Qty. (In MT)	Value (In USD) million
1	GREAT BRITAIN	-	-	20844.14	19.54	30,221.77	41.57
2	TURKEY	65.2	0.25	45.46	0.15	7,074.60	7.42
3	SWITZERLAND	5192.01	9.63	3924.64	7.67	5,142.11	10.84
4	VIETNAM	3270.25	1.66	3276.59	2.17	4,796.89	3.31
5	ECUADOR	580.46	0.4	3708.05	2.92	4,172.44	5.09
6	KOREA REPUBLIC	1292.16	1.39	4536.34	4.31	3,402.44	4.11
7	ISRAEL	2531.74	2.54	4480.12	4.65	1,751.20	2.63
8	AUSTRALIA	2357.29	6.99	2923.47	10.89	1,574.14	6.59
9	NEW ZEALAND	1758.12	1.8	1855.59	3.39	970.25	2.11
10	JAPAN	1368.73	2.7	611.32	2.59	478.82	2.86
11	CHINA	436.23	0.9	238.29	0.73	387.63	0.74
12	SINGAPORE	390.16	5.83	348.05	0.75	311.51	0.8
13	MALAYSIA	157.25	0.34	369.22	0.61	235.96	0.5
14	SAUDI ARABIA	162.14	0.55	325.67	0.86	197.47	0.28
15	THAILAND	75.57	0.24	200.98	0.55	185.13	0.37
16	SRI LANKA	707.31	1.53	300.13	1.37	171.34	1.11
17	BOLIVIA	154	0.14	218.98	0.29	135	0.18
18	QATAR	252.97	0.38	241.22	0.48	111.56	0.19
19	KUWAIT	186.38	2.4	203.33	0.38	106.66	0.21
20	CHILE	60.7	0.07	87.95	0.31	87.24	0.32

Source – APEDA

## Certification under Organic Farming

Organic certification system is a quality assurance initiative, intended to assure quality, prevent fraud and promote commerce, based on set of standards and ethics. It is a process certification for producers of organic food and other organic plant products. India ranks **4th place** in terms of certified area globally.

## Government Program

To promote and increase awareness among farmers related to organic farming Government of India has provisions as follows -

- **Paramparagat Krishi Vikas Yojana (PKVY)** - The program covers cluster formation for organic farming, training, certification and marketing.
- **National Food Security Mission (NFSM)** – The program provides financial assistance for the promotion of bio-fertiliser (rhizobium/PSB) at half the cost
- **Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)** -The scheme promotes third party certified organic farming of niche crops of north east region through Farmer Producer Organizations (FPOs) with focus on exports.
- **Primary Agricultural Credit Societies (PACS), Farmer Producer Organisations (FPOs), -** Entrepreneurs among others can avail loans for setting up of post-harvest infrastructure for value addition to organic produce under 1 lakh crore Agriculture Infrastructure Fund (AIF) of Aatmanirbhar Bharat.

## Objectives

- To examine the development of Indian organic products in the global market.
- To suggest various government plans and policies for organic farmer and exporter.

## Methodology

This study has made use of secondary data to collect information regarding in areas of organic certification process and exports of organic products.

## Findings

- The India organic food market size reached US\$ 1,278 Million in 2022.
- India ranks at 4th place in terms of certified area globally as per the report published by Research Institute of Organic Agriculture (FiBL) and the International Federation of Organic Agriculture Movements (IFOAM) Statistics 2022.
- The India organic food market is experiencing a robust growth with the rising awareness about the products.

## Conclusion

- The India organic food market size reached US\$ 1,278 Million in 2022.
- This sector impacts GDP growth positively.
- It generates export earnings.
- India has the potential to become a global leader in the organic market.
- The government of India takes an initiative to help and give a boost to organic farming as well as the export of the organic products.

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## A Study of the Impact of Digitalization on the Lecturers

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### ABSTRACT

The world economy was wrecked by the COVID 19 pandemic. The whole global supply chain was broken and disrupted. Since normal mobilisation of goods and services became difficult due to lockdown, the digital media then came to be used as a medium to further businesses in the way that services and goods could remain accessible to the public in the comfort of their homes. However, the education sector has evolved to the greater extent as the digitalisation in teaching has become a necessity for all the institutions, teachers and students. During the pandemic, the teachers arose as learners as most of them had become accustomed to conventional teaching methods due to which they were forced to adapt the digital media platforms for teaching. Hence, the main focus of the study is the impact of digitalisation on teachers during and after covid concerning the pre- pandemic scenario as a base along with providing some recommendations in order to improve the online learning models. A quantitative research design was adopted in this study. The method of observation and case studies from previous studies were taken to reach out to the main objective. Total 52 respondents were taken for survey through structured questionnaire. This research work would be helpful to the new researchers, teachers and students.

### KEYWORDS

Teaching, Digitalization, Education, Conventional Mode

### Introduction

Earlier, the concept of teaching was only confined into four walls of the classrooms. The digital transformation was already a requirement for all governments and institutions that this pandemic has accelerated to solve the confinement and the limitations to work and share the same spaces. Institutions having face-to-face higher education systems moved towards an urgent and unplanned online teaching. The disruptions in teaching due to covid came along with a risk and an opportunity to change this disruptive situation.

Digitalisation in education means the use of digital devices for teaching. Even before the pandemic struck, the internet was being used for teaching purposes. However the use was limited to few institutions and disciplines. The foremost way education has been changed due to pandemic is the digital penetration in the hinterlands too, which hitherto were untouched by digitalised mode of education. After the pandemic struck, the only way to make sure that education must remain accessible without any obstruction barring the physical interaction, was inevitably shifting to online mode of teaching. Hence various application based platforms like Zoom video calls, Google meet, Microsoft Teams, Skype Video calling service among others, became prominent choices for online teaching. Apart from live video conferencing and real time teaching, there were also cloud based platforms which enabled students to learn at their own preferred time like from YouTube and unacademy.

## Literature Review

Review of Literature understands the previous research findings of the topic through articles, journals, research papers, thesis, etc. In this research paper, we have reviewed and studied the findings of the following research articles.

**1. Olatunde Aiyedun, Tope Gloria, Eyiolorunse-Aiyedun, Christiana Timilehin, Ogunode Niyi Jacob (2021)** study says that, it was recommended that lecturers and students should incline themselves in the innovative trends of digital teaching and learning respectively.

**2. Rishabh Gandhi, International Journal of Policy Sciences and Law Volume 1 Issue 3**, the study states that digitalization will not only make the life of teachers easier but will also inculcate a habit of self-study in students. By implementing this technique, teachers can have short teaching sessions that will further provide them to do other work.

**3. Dr. Megha Sharma (2020)** study states that proper utilisation of technology will help to improve education. Digital transformation in education can make ready for new encounters, new revelations, and better approaches for learning and teaming up.

**4. Tanya Chatwal (2019)**, study found that combination of technology, digital content and instructions in the education system to make things more effective and efficient than the former traditional education system in place. This paper explains the upcoming trends in the digital education system.

## Objective of the Study

1. To study the impact of digitalization of teaching.
2. To identify the most preferred mode of teaching.
3. To study the challenges faced by teachers at a time of online teaching.

## Hypothesis Testing

1.  $H_0$  (Null Hypothesis) - There is no association between age and most preferred mode teaching.
- $H_1$  (Alternate Hypothesis) - There is an association between age and most preferred mode of teaching.

## Scope of the Study

The study focuses on the growth of digital platforms after Covid-19. It also focuses on how teachers have modified their way of teaching by adapting the new trends in teaching methods through digital media. This research can be useful for teachers as well as students using online platforms for learning. By this research, we are able to gather the information regarding the usage of digital media in teaching and their impact on teachers.

## Research Methodology

The methodology adopted for the study is based on primary and secondary data. The study has tried to assemble the data from the teachers from all the streams. The data from 52 respondents are received via a structured questionnaire method from the area of Dombivli.

## Tools and Techniques Used for Study

The statistical analysis was carried out with the help of Ms Excel. The statistical techniques Chi Square Test and Simple Percentage Method are being used. The analysed and interpreted data have been presented in the form of tables.

## Limitations of the Study

1. Time and resource constraints.
2. The research was confined to limited population.

## Research Analysis

**Table 1: Demographic profile of respondents**

Sr. No	Demographic Profile	Attributes	Frequency	Percentage
1	Gender	Male	16	31.4
		Female	36	69.2
2	Age	21-30 years	23	44.2
		31-40 years	18	34.6
		41-50 years	8	15.4
		51-60 years	3	5.8
3	Streams	Arts	13	26.9
		Commerce	30	57.7
		Science	8	15.4
4	No of Years Teaching Experience	0-5 years	21	40.4
		6-10 years	7	15.4
		11-15 years	12	23.1
		Above 15 years	11	21.2

(Source - Primary Data)

Table 1 exhibits that 31.4% are male and 68.6% are female.

It also indicates 45.1% belong to the 21-30 age group, 33.33% belong to the 31-40 age group, 15.7% belong to the 41-50 age group and the remaining 5.9% belong to the 51 to 60 age group.

Stream wise data depicts that 25.5% belongs to arts stream, 58.8% belongs to commerce and 41.2% comes under science stream.

The data also shows that 41.2% belong to 0-5 years, 13.7% belong to 6-10 years, 23.5% belong to 11-15 years and 21.6% belong to above 15 years of teaching experience.

**Table 2: Familiarity with new digitised methods prior to covid**

Yes	36.5%
No	26.9%
Few of them	36.5%

(Source - Primary Data)

Table 2 indicates that 36.5% respondents were already aware about the digitised teaching methods prior to covid 19 outbreak, 26.9% were not at all aware about the digitised teaching methods, 36.5% respondents were aware of the few digital teaching methods.

**Table 3: Online teaching app used**

Zoom	45	42.45%
Google meet	33	31.13%
Microsoft Team	16	15.10%
Skype	6	5.66%
Others	6	5.66%

(Source - Primary Data)

Table 3 indicates that as far as use of online teaching app is concerned, 42.45% people have used Zoom app, 31.13% people have used Google meet, 15.10% people have used Microsoft team, 5.66% people have used Skype while 5.66% people have used the other online teaching apps for taking lectures.

**Table 4: Sufficient E-learning facilities in the institution**

Yes	30.8%
No	17.3%
Upto to extent	51.9%

(Source - Primary Data)

Table 4 indicates that, 30.8% people have responded that they have sufficient E-learning facilities in their institution, 17.3% have responded that they do not have adequate E-learning facilities in their institution while 51.9% people have marked that their institution provides them e-learning facilities upto some extent.

**Table 5: Increase in workload during online education**

Yes	44.2%
No	32.7%
Upto some extent	23.1%

(Source - Primary Data)

Table 5 shows that, 44.2% people have responded that due to online lectures their workload had been increased, 32.7% have responded that there was no increase in the workload during online lectures while 3.1% have said that the workload was increased upto some extent as compared to normal lectures.

**Table 6: Challenges are faced by the teacher at the time of taking online lectures**

Challenges	SA	A	N	D	SD
Engaging Students	18	25	5	2	2
Passive Students	16	24	7	4	1
Communication Challenges	9	26	10	7	0
Lack of Tech Knowledge	5	18	12	13	4
Infrastructure problem	9	20	15	5	3
Course Structure and Quality	7	15	20	7	3
Power Failure	9	18	17	6	2

(Source - Primary Data)

Table 6 indicates that, the biggest challenge for teachers during online lectures was to engage students as they were passive in nature. Also the teacher had faced the communication challenges and lack of technical knowledge was one of the drawbacks in taking the online lectures. Some teachers faced infrastructure issues for conducting lectures. Many of them had faced the power failure due to which taking online lectures was a difficult task to do and some of them stated that the online lectures could have affected the course structure and quality of the teaching.

**Table 7: Used any of the ICT tools during digital teaching to make it more effective**

Particulars	Never	Rarely	Sometimes	Often	Always
PPT	1	3	11	14	23
Word	4	4	15	15	14
Google Classroom	6	3	8	10	25
Trello	40	7	3	1	1
You Tube	8	10	15	9	10
Excel	9	7	10	15	11

(Source - Primary Data)

Table 7 depicts that most people have a convenience of using PPT,WORD and Google Classrooms in terms of taking online lectures as ICT tools followed by Youtube and EXCEL. The data also states that the people are not much aware about the TRELLO app as an ICT tool so the use of it is too less.

**Table 8: Changed your teaching pattern because of digitalization**

Yes	55.8%
No	11.5%
To Some extent	32.7%

(Source - Primary Data)

Table 8 indicates that 5.58% people have changed their way of teaching due to adaptation of digitalisation while 11.5% people have not changed their teaching pattern. 32.7% people stated that upto some extent they have changed their teaching pattern.

**Table 9: Online platforms increased or saved your time invested in teaching**

Saved time	44.2%
Increased time consumption	38.5%
No change	17.3%

(Source - Primary Data)

Table 9 indicates that 44.2% of people have responded that online teaching had saved their time they invest in teaching through traditional teaching methods while 38.5% have said that online lectures were time consuming. 17.3% of people responded that there was not much change.

**Table 10: Face any health-related issues due to continuous exposure of electronic devices**

Yes	78.8%
No	17.3%
Don't Know	3.8%

(Source - Primary Data)

Table 10 indicates that 78.8% of people have responded that they did face health related issues due to continuous exposure of electronic devices for online lectures while 17.3% stated that they didn't face any health issues due to the same. 3.8% people are not aware of the issues whether they actually have faced any health issues or not.

**Table 11: Issues faced due to online lectures**

Particulars	No of Responses	Percentage
Strain on eyes	40	29.41
Back aches	27	19.85
Headaches	27	19.85
Cervical pain	12	8.82
Mental fatigue	18	13.23
Insomnia	5	3.67
Other	1	0.73
No issues	6	4.41

(Source - Primary Data)

Table 11 indicates that, due to online lectures 29.41% people had faced issue of strain on eyes, 19.85% were having backaches, 19.85% had faced headaches, 8.82% were caused issue of cervical pain, 13.23% faced mental fatigue, 3.67% were having issue of insomnia while 0.73% people had other health issues due to online lectures. 4.41% of people have rescinded that they didn't face any such health issues due to digital teaching.



**Table 12: Problems faced by students during online classes**

Particulars	No of Responses	Percentage
Lack of suitable devices	30	17.54
Lack of technical knowledge	24	14.03
Poor Connectivity	43	25.15
Lack of concentration	44	25.73
Inability to understand complex topics	30.	17.54

(Source - Primary Data)

Table 12 indicates that 17.54% of people have responded that students faced problems due to lack of suitable devices at their home. 14.03% have responded that lack of technical knowledge was one of the issues faced by students during online lectures. 25.15% have stated that students had faced poor connectivity issues while 25.73% have responded that students had lack of concentration during online lectures. 17.54% of people have observed that students were unable to understand the complex topic in online classes.

**Table 13: Effective teaching method**

Particulars	Percentage
Traditional Method	61.5
Online Method	3.8
Hybrid	34.6

(Source - Primary Data)

Table 13 shows that 61.55% people think that the traditional (old) method of teaching was effective as compared to online mode while only 3.8% think that online mode of teaching is better than traditional method. 34.6% of people have an opinion that hybrid method i.e. combination of traditional and online method of teaching is more comfortable.

**Table 14: Rate your satisfaction level for digital teaching**

Particulars	Percentage
Fully satisfied	3.8
Satisfied	48.1
Neutral	36.5
Dissatisfied	9.6
Extremely Dissatisfied	1.9

(Source - Primary Data)

Table 14 indicates that 3.8% people were fully satisfied with digital teaching, 48.1% were satisfied, 36.5% were neutral, 9.6% were dissatisfied and 1.9% people were extremely dissatisfied with digital teaching.

**Table 15: Chi-Square Calculation**

**Age and Preferred Mode of Teaching.**

Calculate Value	Table Value	Degree of Freedom	Level of Significance
12.02	12.592	95%	5%

(Source – Primary Data)

Calculated value of chi-square is 12.02 which is less than the table value 12.592 at 95 degrees of freedom and 5% of level of significance. The calculated value is less than the critical value therefore null hypothesis is accepted. Hence, it can be concluded that there is no association between age and preferred mode of teaching. Preferred mode of teaching is not affected by age.

**Findings**

1. The awareness about the digital teaching amongst all the lecturers have increased due to the outbreak of Covid-19 because in that period all the educational institutes closed down, so that the lecturer left with this online teaching.
2. The study showed that most of the teachers were aware about the digital teaching apps that were needed to take online lectures.
3. Zoom video service was the most chosen application for online teaching. Google meet and Microsoft teams were the close second and third.
4. Online lectures also entailed more challenges for teachers as compared to offline traditional teaching methods. Lack of interest by the students, inability in concentration during lectures, quality of teaching being affected adversely on the account of lack of proper discipline, were some of the recurring problems faced by teachers.
5. Teachers concur that online teaching entailed a change in the teaching pattern which caused them to change their style and delivery.
6. A lot of teachers have shown support for hybrid teaching as a better alternative as compared to either completely online or offline teaching methods so as to imbibe best of both worlds that would benefit the students as well as the teachers.

**Suggestions**

1. Educational Institutions are advised to provide digital facilities and digital education to both teachers and students to make them future ready and well equipped. This would bring about a flexibility in both imparting education as well as getting it.
2. Teachers must reduce the duration of the lectures in online mode so as to decrease the time of continuous exposure of digital devices for both the students and themselves. This would give them a breather to recuperate their wellbeing.
3. Parents need to ensure that their children have a basic idea of how digital devices work and various application functions. This would go a long way in discharging the burden off the teacher's shoulders to teach elementary tasks to students before actually teaching.

**Conclusion**

Since digitalisation and online teaching has been comparatively less practised prior to covid - 19 Pandemic, the sudden demand of the education sector to shift to digital means came with a lot of challenges to both the teachers and students. This further proves the overwhelming reliance of both the teachers and students on traditional teaching methods. But since the pandemic subsided, and students returned to the classroom, a traditional method of teaching has been revived once

again. Along with this, the seamless connectivity and on the demand access that online teaching provides for can never go out of the picture. Therefore it makes sense to imbibe the best of both worlds so that education becomes flexible, exciting and efficient without compromising the quality of it. This would enable both the students and teachers in the long run. Hence Hybrid teaching methods are the future.

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## **5 G- Enabled Education: Research on the impact of e-learning in higher education**

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### **ABSTRACT**

Every area of learning has been significantly impacted by new technologies like mobile phones, social media, and artificial intelligence, where digital connectedness serves as the basis for how individuals learn. Distance/virtual learning is made possible by the ability of the current Internet and pre-5G cellular communication networks to provide visual and audio data. However, a crucial component of a new educational paradigm known as Education 4.0—remote physical connection between students and educational facilities—remains lacking. Students will be able to feel real items and remotely operate them thanks to the 5G cellular network's high latency and reliability performance. In this paper, we identify and examine the special advantages that 5G networks can offer to education 4.0, as well as the technological issues they may present and possible solutions. Modern technical developments have changed societies and raised living standards all around the world. This transition is mostly being driven by mobile and digital connection, which has enabled various vertical industries, including the impending fourth industrial revolution.

### **KEYWORDS**

Education 4.0, 5G verticals, remote control, AR/VR, and remote lab

### **Introduction**

A new paradigm in teaching and learning, known as "Education 4.0," aims to better prepare students and the next generation of learners for the coming industrial revolution [2], which will call for the use of cutting-edge technologies like advanced robotics, the Industrial Internet of Things (IIoT), 3D printing, and others. The shift from traditional education to ubiquitous, customized education that is a part of the connected digital ecosystem has also been expedited by the Covid-19 pandemic. Conventional education is based on in-person instruction in classrooms using printed materials. The shift from traditional education to ubiquitous, customized education that is a part of the connected digital ecosystem has also been expedited by the Covid-19 pandemic. Conventional learning focuses on in-person instruction using printed materials in classrooms. All evaluations and exams are paper-based, and laboratory sessions are time and space constrained. Education will undergo a change as a result of mobile and digital connectedness. For instance, there are a tonne of learning resources readily available at nearly any time, including video lectures, audio books, and lecture notes. Accessing any kind of information is also quite simple and takes very little time. Computer-based exams can give students immediate results and feedback in place of paper-based exams. Education 4.0 facilities include, but are not limited to, AI assisted self-regulated learning with the aid of smart sensors and wearable devices [3], AR/VR assisted remote learning facilities to improve telepresence and remote learning experience [4], AI-based assessment and early progress recognition systems to allow students to learn at their own pace and to support students' success [5], smart campus facilities to provide flexible and immersive learning environment that include smart sensors,

wearable devices, and early progress recognition systems. Also, with 1.5 billion learners, the Covid-19 pandemic has made the use of online learning inevitable. Sadly, some areas of higher education call for direct physical contact between students and lab equipment.

**Objective**

The limits of the current, extensively used communication networks are the principal barrier to remote access and control. The communication network must be able to convey sensory data so that students can feel the texture, force, or weight of actual lab objects in order to enable remote access to the physical laboratories. The communication network must be able to send control data with extremely high communication performance in terms of latency, dependability, and data rates for students to interact physically with physical objects, including robots, in lab settings. Future educational options, or Education 4.0, will be made possible by the fifth generation of cellular communications (5G) (see Fig. 1). Outstanding performance and capability of 5G serve as the cornerstones of support cutting-edge technology in education. Ultra-Reliable Low-Latency Communications, for instance (URLLC) would be the game changer since it permits the exchange of physical skills over the mobile communications. Virtual Reality was supported by Enhanced Mobile Broadband (eMBB) (VR) and 360-degree video streaming would give students in virtual classes an immersive experience. Large-scale Machine Students may check the availability of resources including classrooms, laboratories, and sporting equipment through a smart campus backed by communications (mMTC), which would also offer remote booking and scheduling services.

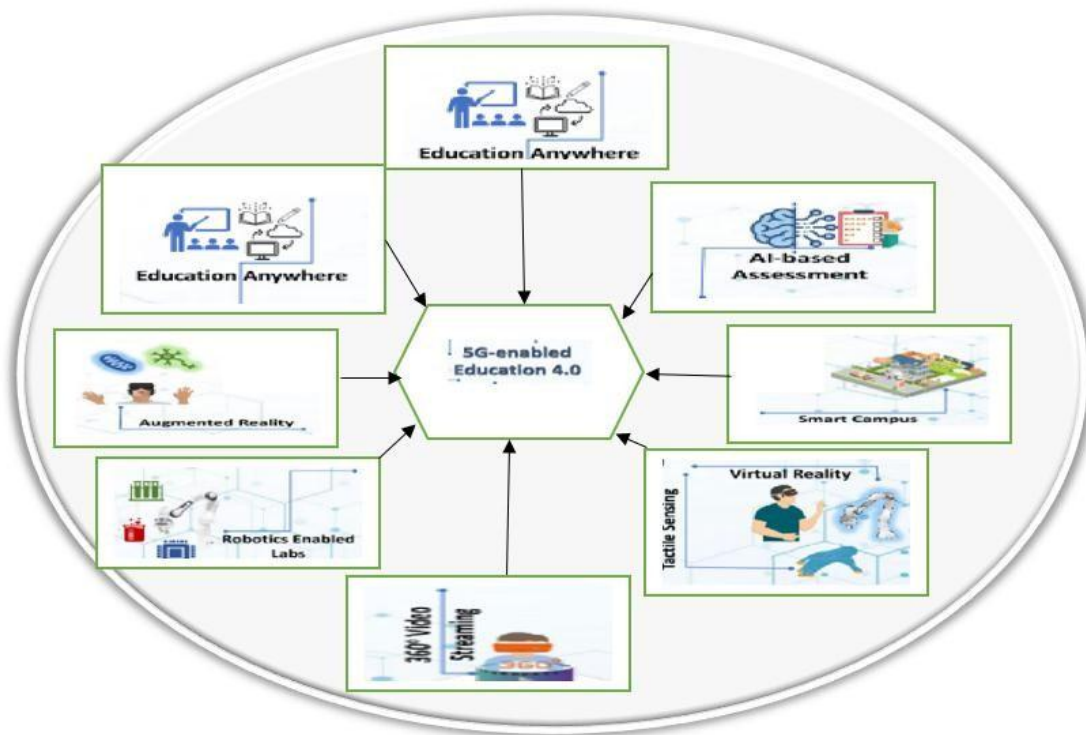


FIGURE NO 1: Education 4.0 environment with 5G support.

In this perspective study, we provide our predictions for how 5G will contribute significantly to the paradigm shift in education. Our study, which focuses on remote learning in higher education, particularly remote laboratory and training cases, takes this comprehensive perspective into account. With relation to use cases and 5G enablers, we evaluate crucial technologies that are essential for remote laboratory and training. We then highlighted the present issues, enabling technologies by stressing 5G KPIs, as well as

feasible solutions \son this context, where we highlight their uniqueness and dif- \sference from other verticals, such as Industry 4.0 and Health- \scares.

## **Key Enabling Technologies in Education**

Institutions in the field of education, particularly in higher education, offer a large array of digital tools, resources, and facilities that are mostly accessible through mobile devices. By 2025, however, it is anticipated that global mobile traffic will have increased to 607 exabytes (EB) per month, signalling a significant growth in the amount of data that needs to be processed and transferred [6]. Unfortunately, the data rate, latency, and dependability of pre-5G mobile communication technologies are severely constrained, making it impossible to implement innovative educational environments. By highlighting the importance of 5G mobile communications, we give essential enabling technologies, communication needs, and example use cases of education 4.0 in this part.

### **A. 360-degree video streaming in high quality**

Learners need to experience the remote environment as close to real physical attendance as possible to be fully satisfied from the learning experience. This is only possible with high quality 360° video streaming which will be observed via headsets to provide real-time experience of remote environment, irrespective of distance. For example, to achieve optimum user experience, we need to consider the human eye as a reference. The human eye has the capability of focusing close and far objects, sees under low and high light, and has very wide view even without moving the head (horizontally 150° and vertically 120°) which requires 720 million pixels of display [7].

### **B. Extended Reality, Virtual Reality, And Augmented Reality (AR, VR) (XR)**

Remote interaction is required by the new educational paradigm to provide learners with the requisite level of experience. To meet the goal of Education 4.0, where students will be able to hear, see, feel, and participate in the remote learning environment, remote lectures delivered solely through video conferencing platforms are insufficient. This will motivate pupils to actively engage in the learning process as opposed to being spectators. The primary enabling technologies for the aforementioned interactive learning environment will be AR, VR, and XR. Although VR mostly focuses on virtual environments without any real-world aspects, creating entirely synthetic environments, AR primarily focuses on real environments by overlaying virtual information on top of them. On the other hand, XR is seen as an integrated cyber-physical world that the user is unable to discern. The "education at any time and anyplace" concept will be made possible by AR, VR, and XR, which can offer common surroundings for learners who are physically in various locations for interactive and collaborative learning. Students will have access to a remote cyber-physical environment where they can connect, meet, and communicate. This will lead to novel teaching techniques such using augmented reality (AR) to immerse students in remote lab settings or virtual reality (VR) to examine microscopic plant cells as if they were human-sized. This will lead to greater subject comprehension, increased motivation, and improved learner tutor experiences.

### **C. Texture Sensory**

The current remote learning tools, such as video and audio by themselves, are unable to deliver the Education 4.0 experience that is envisioned. For students to attain a true sense of presence, the surroundings must be felt. This new educational paradigm offers immediate haptic perception of the ability to see, hear, feel, operate, and participate in remote environments to complete the remote attendance puzzle, engaging in conversation. Recent developments in haptic communications make it possible to feel the texture of distant objects. Real-time surface that gives a strong sensation of presence. To maintain system stability, common haptic sensors sample and send data at a frequency greater than 1 kHz [8].

#### **D. Teleoperation**

Attending a classroom is insufficient for In education 4.0, students will have control over a remote environment to accomplish the interactivity that calls for real-time robotics integration and teleoperation capacity, Both automation and control. One of the most crucial components of future schooling is real-time remote control. It includes remote access to laboratories, but is not restricted to that. Environment and tools for students to use robots to carry out live laboratory investigations. This is a crucial component of higher education, especially for STEM courses (science, technology, engineering, and math) that call for laboratory work. However in order to accomplish flawless operation, developments in teleoperation come with strict communication requirements. Real-time control also needs dedicated bandwidth, extremely low latency, and extremely high reliability, none of which can be provided by pre-5G communication technology.

#### **E. Machine Learning And Artificial Intelligence (MI)**

The main components of Education 4.0 will be ubiquitous, flexible, adaptive, and personalized learning. According to [2], personalized and adaptive learning strives to tailor instruction to each student's needs and modify the curriculum accordingly. Students can study at their own speed by introducing increasing complexity assignments to them when they reach particular learning milestones, for instance. Pre-5G technologies are therefore no longer adequate to support the new educational ecosystem.

Also, students can be evaluated in many ways, and the curriculum can be changed to meet their needs. This demands a rapid exchange of massive amounts of data, as well as high processing capacity, where communication plays a crucial role. Also, the overhead increases and the demands of communications become more significant with the integration of AI and ML on communication networks via MEC.

Every learner's demands should be met by the learning environment, which calls for a flexible setting that is highly adaptable. The AI/ML algorithms will need to be located at the edge of the network since new educational environments will need them to operate with the least amount of latency and on-the-fly. For Education 4.0 to provide high-quality user experiences, all of the enabling technologies previously discussed will rely on AI/ML. As a result, communication networks must perform within strict limits and rely on AI and ML to accommodate changing user expectations.

These communication requirements include high data rates to allow for the quick exchange of massive amounts of data, extremely low latency to prevent the problem of out-of-date data, and extremely high dependability to guarantee data integrity. Further enabling and developing future on-the-fly AI and ML will be greater coverage and super connection with other devices.

#### **Technical Challenges and 5g Solutions**

New learning opportunities will be offered by Education 4.0 thanks to the key technologies discussed in the previous section. Mobile communication networks will face difficulties as a result of the tremendous growth in the use of smart devices and services in this new educational environment. In this section, we outline the connectivity needs for the main mobile communications enabling technologies. In order to stress the importance of 5G as an enabler of Education 4.0, we also compare 5G mobile communications with 4G mobile communications.

#### **Current E-Learning Trends in Higher Education**

The COVID-19 Epidemic and the Internet Age Revolution are two examples of events that have had an immediate impact on the field of e-learning. As a result, online learning has suddenly become more popular. Other advantages of online learning include its scalability and lack of time constraints (for the most part). The primary element that contributes to this industry's size is its ability to offer

time and learning flexibility, regardless of whether you are trying to upskill yourself or acquire new skills.

The majority of people who prefer online education do so for re-skilling and certification purposes, which increases its influence among India's youth and working-class population. For this reason, companies are now embracing e-learning platforms to upskill their staff. WBEL or online learning is one of the most innovative measures for a nation like India where e-learning can be a game-changer due to social backwardness, population, financial problems, the ratio between instructor & student, etc.

E-learning is a key component of higher education sectors' efforts to speed up the learning process and keep up with rivals and emerging technologies that are changing quickly. The rise of interactive media has caused modifications in the conventional teaching approach, along with the advancement of information and communication technologies. E-learning is crucial to the transformation of information competence and enhanced academic achievement.

The exchange of knowledge in higher education has undergone various significant modifications as a result of the installation of an e-learning platform. Other advantages of e-learning in higher education include the idea to include students who are unable to continue their education full-time in the development of discipline, manners, technical abilities, and other talents in a cost-effective way.

India will have the most youth by 2025, and if they don't receive a quality education, neither they nor their nation will advance. Since many of them reside in rural areas, villages, etc., offering high-quality education would raise the likelihood that the population will be utilised properly. To make the Internet accessible to everyone, policymakers and legislators should take the lead in this area.

As a result, we draw the conclusion that policymakers and legislators should take the lead in the Internet sector so that it is open to everybody. Institutions must implement e-learning in areas like research, management and administration, finance, and other areas to make greater use of it. By the use of inexpensive technology and regular internet connection, the government and educational institutions must encourage students to utilise e-learning platforms effectively in the learning environment.

## Conclusion

The education system of the future, known as "Education 4.0," will be made possible by a number of cutting-edge digital technologies. The learning experiences of the future will be ubiquitous, immersive, adaptive, and individualized. By enabling strict communication needs and delivering a high-quality experience for both students and teachers, 5G is a crucial facilitator of this ecosystem. We present our vision for Education 4.0 in this study by highlighting the critical function of 5G as an enabler. We look into important enabling technologies and Education 4.0 use cases, particularly the remote training and labora- tory use case. Besides, technical difficulties are determined, and prospective 5G solutions are assessed, of Education 4.0.

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## **Study of Implication, Effect and Benefit of National Education Policy-2020 on Indian Education System**

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### **ABSTRACT**

National Education policy-2020 is changing after 34 years it is great to students learn her or him interest or talent subject. Education plays important role in building our Nation and future of nation is depends on education system. Old education policy 1986, i.e. after 34-year Indian Government is going to change the study pattern to build the Nation. This is 3<sup>rd</sup> change in the education policy. Change of education is very essential for offering to school and college education in the India due to reason that education leads to progress in society.

In this paper discuss what will be benefit and effect if our nation implicates the new education policy-2020. Also discuss in how many years students will complete his or her graduation with interest subject. In this paper discuss the role of national education policy (NEP-2020) on our country rising as a global economy and power

### **KEYWORDS**

Indian Education of youth, NEP 2020, National Education Policy 2020, of Indian Education Future, Effects on the Stakeholders, NEP 2020 – Students(learner), NEP 2020 - Teachers, NEP 2020 - Parents.

### **Introduction**

Dr. APJ Abdul Kalam said that “Some of the brightest minds in the country can be found on the last benches of the classroom”.

Dynamic policy is Education policy 2020 of 21<sup>st</sup> century. Education plays important role in building our Nation and future of nation is depends on education system. Old education policy 1986, i.e. after 34-year Indian Government is going to change the study pattern to build the Nation. This is 3<sup>rd</sup> change in the education policy. Change of education is very essential for offering to school and college education in the India due to reason that education leads to progress in society. Different countries implement different education system to change the life cycle of schools and colleges. Government of our country was change education system in 1986 but recently i.e. 2020 drafted the education policy by an expert headed by former chairman Dr. K. Kasturirangan, of Indian Space Research Organization (ISRO). This Committee suggested progressive and drastically changes in old education policy i.e. (1986 education policy) also they give guidelines to effective implementation and change in our country by 2030. Higher education under NEP 2020 will be useful. Four pillars of NEP are Access, Equity, Quality and Accountability. The structure of new education policy will be 5+3+3+4. The students- teacher interaction plays very significant role in the new education era. Appropriate suggestions are made to realize the education policy and make it defect free and effective from a public point of reference and for the prosperity of the country. The strength & weakness of new education policy are identified with respect to various stakeholders.

### **Objectives**

1. To understand the fundamental elements of NEP-2020
2. To understand basic feature and benefit of NEP-2020 in higher education
3. To understand use of NEP-2020 to increase the Indian Economy

## Data Collection

Primary data: Telephonic interview of some Degree College Principals.

Secondary data: Review of related literatures from Indian education sources.

## Basic Feature or proposed use of NEP-2020 for higher education is as follow

1. As per NEP draft the 3 types of Higher Educational Institutions (HEIs): Research Universities, Teaching Universities and Autonomous Degree-Granting colleges. As per NEP draft the aim is to provide autonomy to all higher education institutions.
2. Higher education institutions to be governed by Independent Boards with complete academic and administrative autonomy.
3. As per NEP draft the aim is to universalize the pre-primary education by 2025 and provide foundational literacy/numeracy for all by 2025.
4. Main aim of NEP 2020 is almost doubling the Gross Enrolment Ratio (GER) in higher education to 50 % by year 2035.
5. Encouraged the private HEIs to offer larger numbers of free ships & scholarships to students.
6. NEP-2020 Recommends setting an Indian Institute of Translation & Interpretation (IITI), National Institute (or Institutes) for Pali, Persian and Prakrit, strengthening of Sanskrit and all language departments in HEIs, and use mother tongue or local language as a medium of instruction in more HEI events.

## Benefits of NEP-2020

The new policy is a comprehensive good framework for elementary Education to higher education and vocational training in both rural & urban India. The policy expertise set a new education.

Choosing what students want to learn or selecting of subject should be the decision of students him or herself, depending on the quality, skill sets and inbuilt talents.

The policy expects a new set of regulations to make the education pedagogic more experimental, inquiry-driven, discovery and application-oriented learner and research centered, analysis-based, more flexible, interesting and enjoyable, and futuristic so that the educated output can support countries economic & social growth. Professional education will become an integral part of the higher education system.

The policy used & techniques used in teaching should develop habit of self learning and less dependence on teachers. It will help them to reflect on their own and doing something new. Old NEP 1986 help students to get degree but the new NEP-2020 policy will help students to learn application-based knowledge with interest, talent and capacity.

HEI faculty Members are known as collaborators and guides to teach students and make them smart innovators and good innovative thinkers.

Interest and through their field of study, learners' (students) have the right to select subjects.

Four-year Undergraduate programmes are with a provision to exit after 1st year with a diploma, after two years with an advanced diploma, after three years with a pass degree, and after four years is use of 1<sup>st</sup> year knowledge her or him will do project i.e. project based degree.

## Conclusion

In present NEP-2020 policy in field of education will contribute a lot to youth and our country. It is a big task to improve the Indian education system. Conventional education had Prevalent at time before the British entered in India but by East India Company was provided new education model in our country after 1813 through historic Chapter Act. From that time committee to make education easy to available general public. Some committee succeed and some of them not able to succeed due to funding, Government policy, knowledge of public, and other factors.

There is a big change after 34 years of education system there was gap between academia and industry, because of this gap production of well skilled & educated students/learners will not find her/him place in corporate and industry that's why unemployment increase. But new NEP-2020 will give opportunity to students find job in different companies with good quality and confidence. Also foreign students will take and learn education from our country India. Because of that our Indian Economy will be increase.

Since our country got independence, Government of India has taken dream to make education for each and everyone so that general citizens can get education at low cost or free of cost. It will work out that the execution of programme and education policy not duty of our Govt. but how it will be executed which will every one bear in mind. The entire proposals that have proposed in NEP-2020 will great potential to give more success of stakeholders in future.

Vocational course's introduction will a new concept, tension lower the tension of board exams, new subject's introduction, reduce the wall of streams and many more positive things are proposed. Because of apply the NEP-2020 students will choose their subject that they want to be learn and their interest.

If an individual plans the selection of subjects according to the internal talent and skill set there will be more chances of getting success in getting jobs. The last words to conclude, it will yet a proposal in coming few months it will take its final & good shape and also ready for implementation. The execution and implementation of the NEP-2020 plans in real ground level that will yield the actual results, the good and beneficial outcomes of the NEP 2020. In selecting the strong potential areas, the dermatoglyphics can reveal students deep-seated qualities and talents. The Fingerprints of the person remain unchanged during a lifetime of an individual.

## Suggestions

1. The simple execution of a new strategy on education will help when ground level improvement would have to be ensured by the administration.
2. NEP-2020 Proposal, Arts, Music, Sculpture, Games, Yoga, Social Service etc. Will be treated as regular courses instead of supportive course' 33.33% parent.
3. Another language burden on students like Sanskrit and other regional language it will put as option not to imposed
4. According to the National Education Policy-2020 proposal, Art, Music, Sculpture, Games, Yoga, Social Service etc. Will be treated as regular courses instead of supportive course". Will it Burdon on parents pocket it will be minimize.

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Note: Due to time constrain I have taken interviews of Degree college principals regarding NEP - 2020.



## **Assessing The Impact Of Technological Adaptation On The Travel And Tourism Industry Post COVID**

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### **ABSTRACT**

#### **Purpose**

Technology and social media are evolving very quickly these days. India is a big market for travel and tourism. The widespread use of web applications and the increasing number of social media applications over the last decade have given a new form to the promotion of tourism destinations. Technology has helped reduce costs, increase operational efficiencies, and improve services and customer experiences. The main objective of this study is to assess the impact of technological adaptation on the travel and tourism industry.

#### **Methodology**

This research is based on a questionnaire method, which is primary data limited to 100 people. Primary data was collected by preparing questionnaires and randomly asking subjects to fill them out. The sample size of the study is limited to 100 respondents in some areas of the Mumbai region. The research design used in this project is a descriptive design.

#### **Findings**

The prospective travel customers get maximum information about the travel industry through the internet, so the companies should update their websites regularly about the next tour, the packages about the tour to the places, etc., so that it becomes easier for the customers to get all the information at one Location. Most respondents rely on mobile technology for travel, so the companies should create various applications of the websites that are easily accessible from the mobile devices. This helps customers to get all the information at the touch of a button.

#### **KEYWORDS**

Technology, Travel and Tourism, Website, Travel App

#### **Introduction**

The tourism industry as compared to the other important industries of a country is highly affected due to the internal and external shocks. Social media has made a huge impact on the tourism industry. Consumers engage with social networking sites to research trips, make informed decisions about their travels and share their personal experiences of a particular hotel, restaurant or airline. TripAdvisor in particular has had a wide-reaching effect on the industry.

## Literature Review

A lot of tourism researchers have put ample emphasis on the use of the Internet in the travel and tourism industry. Not only the buyers but suppliers too can get benefited by the use of the Internet. They can promote their offers on their portals and in turn, can sell the products at any time to any customer globally.

Likewise, and depending on the user's granting access, data from wearables (e.g., smart watches, activity trackers, clothing) can be collected during the trip. Lastly, user generated content (UGC) is generated during and after the trip. Such content includes online reviews, comments in social networks, and pictures and videos posted online (Li et al. 2018). User-generated content requires AI processing before it can be properly used by researchers and analysts.

Artificial Intelligence can help in processing sentiment analysis in textual information (Schuckert et al. 2015) and analyzing and tagging characteristics of pictures, audios, or videos that are shared by users (e.g., place, participants, sentiments). These techniques greatly enhance UGC as a data source, by providing much richer information to the processes that use these data. A user profile can be created by joining these data sources together. This profile can then be used to recommend products and services that are tailored to the user's needs.

## Technology Trends Emerging In The Travel And Tourism Industry

### 1. Voice Search & Voice Control:

Smartphones, smart speakers and AI assistants have all helped to increase the relevance of voice search as far as technology trends in the travel industry are concerned. In particular, a growing number of travel customers are using voice search to find and book airline tickets, hotel rooms and travel experiences.

### 2. Contactless Payments:

Another important form of travel tech is the ability to accept contactless payments. This will allow travel companies to process payments much more quickly, including in situations where customers do not have access to cash, or their credit or debit card. It can also enhance the customer experience, because it is a time saver.

### 3. Internet:

One of the most exciting emerging travel technology trends is the Internet Which involves internet-based inter-connectivity between everyday devices, allowing them to both send and receive data.

### 4. Artificial Intelligence (AI) :

Away from robots, artificial intelligence is being used in other ways too. Perhaps the most obvious use within the travel and tourism industry is for customer service purposes, with chatbots possessing the ability to deliver rapid response times to problems or queries

### 5. Robots

Robotics technology is one of the most exciting forms of travel technology and it is constantly improving. Within hotels, for example, robots have been used in concierge-like roles, helping to greet guests when they arrive and provide information.

Within restaurants, robots can potentially have a role in food preparation and food service. In airports, they can be used to detect concealed weapons, while some manufacturers are also using robotics to create luggage cases that intelligently follow you

## Benefits To Adapt Technology In Tourism

Here are a few ways technology has changed travelling and made it more fun and convenient.

### i. Quick planning:

Technology has made planning the trips easier. All the information you need to plan a perfect trip is available online. By spending just a few hours surfing the internet you can find all the essential

information you will need about the chosen destination. Even if professional help is needed it is necessary to find the best holiday travel agents online and contact them for guidance.

ii. Easy booking:

With the help of technology, people can book flights, accommodations and even desired activities in minutes. The internet has made it possible to find the best flights and accommodations. Customers do not have to print the tickets or hotel reservations as they have the option of e-tickets and mobile check-ins. It will save the trouble of carrying around a lot of documents and also save a lot of paper.

iii. Efficient packing routine:

Technology has made it possible for people to improve the packing routine. The technology allows to squeeze in a lot of things without worrying about the weight limit. They do not need to pack in paperback books to read while waiting at the airport or long flights.

iv. Great travelling experience:

Technology has made it possible to travel efficiently. Travellers no longer have to worry about reading maps and getting lost because now they can use Google maps to reach the destinations that the travellers want to visit. It will save the trouble of reading the map and asking for directions. Google maps can guide anywhere anytime and it also offers suggestions.

v. Stay connected:

Technology allows us to stay connected with the world while they are travelling. If they cannot take time off work then travellers can work from a remote location. Apart from that, they can keep in touch with loved ones. It makes travelling to foreign land safer as people will know where you are

vi. Personalized traveling experience:

To have the perfect travelling experience people like to have a personalized and unique experience. The technological advancements have made it possible to have a unique experience that is perfect for everyone. There are a lot of platforms like blogs, apps, chatbots, services, etc. can help in planning the dream trip and enjoy your time.

vii. Electronic Payments made travelling safer and easier:

Apple Pay, Samsung Pay or Google Wallet everything is so much easier with electronic payments. Among the advantages of going cashless it is worth highlighting two of them: the convenience there is no longer the need to carry a lot of cash, a couple of credit cards or even stay in the queue for ATM withdrawals.

viii. Reduced Need for Travel Agents :

Technology is being used in multiple different areas of life to improve the way that we do things. It has affected the way that we travel by giving us complete control over the destination and the prices that they are willing to pay for the services that we are getting. They can simply Google search and find a company offering you a cheap holiday to any destination of their choice.

ix. Easy to get Visa :

Applying for and receiving a visa for travel used to be a time-consuming process. The people had to often embassy of the country they wanted to visit just to collect the necessary paperwork for the application. Things have sped up rather substantially over the last decade.

## Research Methodology

### 1. Method of Data Collection

#### A) Primary Data

Questionnaire: Primary data was collected by preparing questionnaire and the people were randomly being requested to fill them.

#### B) Secondary Data:

Secondary data will consist of different literatures like books which are published, articles, internet and websites.



## 2. Sampling Design

We have used 'Simple Random sample which is meant to be an unbiased representation of a group.

## 3. Sample Size

The sample size of the research is restricted to 100 respondents in some areas of Mumbai Region.

## 4. Research Design

A research design is a framework or blueprint for conducting the marketing research project. The research design used in this project is a Descriptive Design.

## 5. Research Limitation

1. Time and cost constraints were also present.
2. Chances of some biasness could not be eliminated from respondent.
3. Due to limitation of time and cost the sample size is kept very small.
4. Geographic location is also limited to some areas of Mumbai.

## Objectives of The Study

- To understand the concept of digitization in the travel and tourism industry
- To understand the contribution of mobiles, social media, online travel booking in the growth and success of tourism industry

## Findings And Discussions

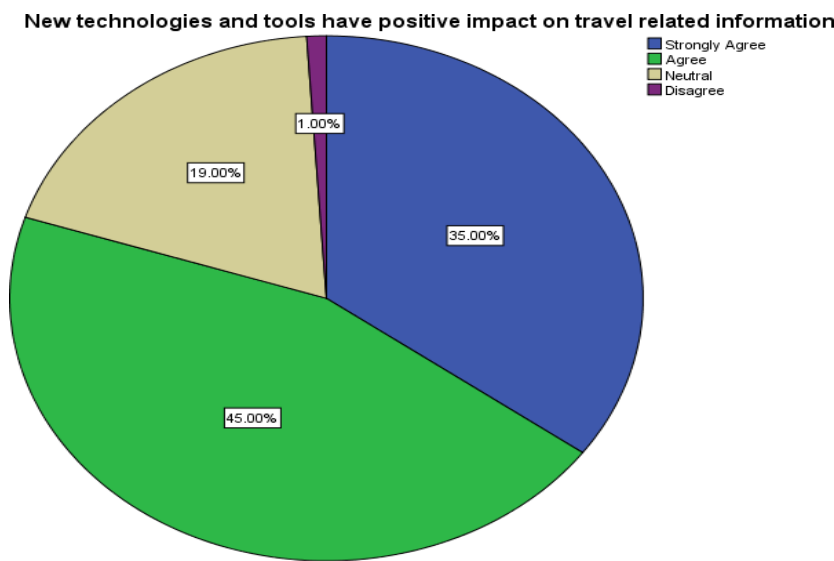
### i. From where do you get information of the travel activities?

	Frequency	Valid Percent	Cumulative Percent
Valid Travel agencies	10	10.0	10.0
Word ofmouth	26	26.0	36.0
Internet	62	62.0	98.0
TV advertisement	2	2.0	100.0
Total		100.0	

According to the survey conducted, 62% of the respondents get information about the travel activities from the internet, 26% of the respondents get travel information through word of mouth, 10% of the respondents get information from travel agencies and only 2% of the respondents get information through TV advertisement.

**ii. New technologies and tools have positive impact on travel related information**

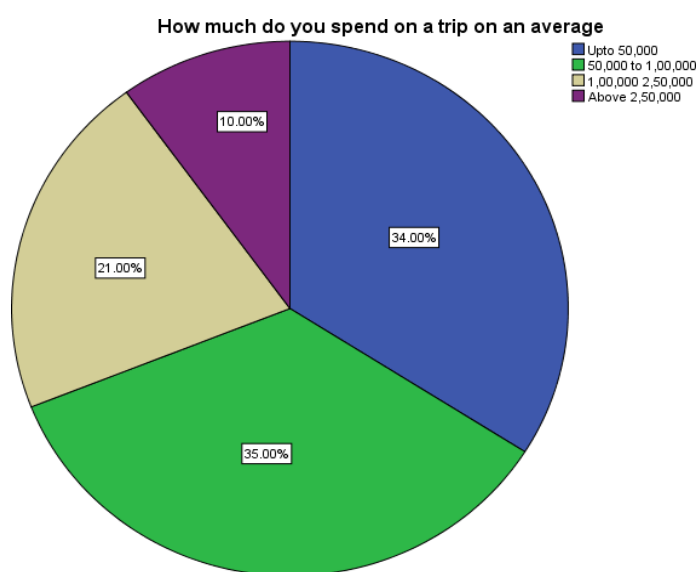
		Frequency	Valid Percent	Cumulative Percent
Valid	Strongly Agree	35	35.0	35.0
	Agree	45	45.0	80.0
	Neutral	19	19.0	99.0
	Disagree	1	1.0	100.0
Total			100.0	



According to the survey conducted 45% of the respondents agree that new technologies and tools have positive impact on travel related information, 35% of the respondents strongly agree that new technologies and tools have positive impact on travel related information, 19% of the respondents are neutral that new technologies and tools have positive impact on travel related information, 1% of the respondents disagree that new technologies and tools have positive impact on travel related information and there was not a single respondent who strongly disagree that new technologies and tools have positive impact on travel related information.

iii. How much do you spend on a trip on an average

		Frequency	Valid Percent	Cumulative Percent
Valid	Upto 50,000	34	34.0	34.0
	50,000 to 1,00,000	35	35.0	69.0
	1,00,000 to 2,50,000	21	21.0	90.0
	Above 2,50,000	10	10.0	100.0
Total			100.0	



As per the survey conducted 35% of the respondents spend Rs. 50,000-Rs.1,00,000 on an average per trip 34% of the respondents spend upto Rs. 50,000 on an average per trip, 21% of the respondents spend Rs. 1,00,000- Rs. 2,50,000 on an average per trip and 10% respondents spend Above Rs. 2,50,000 on an average per trip.

iv. What is your favourite travel website?

		Frequency	Valid Percent	Cumulative Percent
Valid	Make my trip	60	60.0	60.0
	Trivago	16	16.0	76.0
	ThomasCook	11	11.0	87.0
	Expedia	9	9.0	96.0
	Clear trip	4	4.0	100.0
Total			100.0	

According to the survey conducted 60% of the respondents favourite travel website is Make my Trip, 16% of the respondents favourite travel website is Trivago, 11% of the respondents favourite travel website is Thomas Cook, 9% of the respondents favourite travel website is Expedia and only 4% respondents favourite travel website is Clear trip.

v. **Do you rely on mobile technology for travelling?**

		Frequenc y	Valid Percent	Cumulative Percent
Valid	Yes	89	89.0	89.0
	No	11	11.0	100.0
Total			100.0	

From the Survey Conducted, 89% of the respondents rely on mobile technology for travelling whereas only 11% of the respondents don't rely on mobile technologies for travelling.

vi. **New technologies as online booking, social media or online feedback have made travel easy**

		Frequency	Valid Percent	Cumulative Percent
Valid	Strongly Agree	48	48.0	48.0
	Agree	38	38.0	86.0
	Neutral	12	12.0	98.0
	Disagree	2	2.0	100.0
Total			100.0	

According to the survey new technologies as online booking, social media or online feedback have made travel easy and there was not a single respondent who strongly disagree that new technologies as online booking, social media or online feedback have made travel easy,

### **Suggestion And Conclusion**

- i. The respondents get maximum information of the travel industry over the internet so the companies should frequently keep updating their websites about the next tour, the packages about the tour to the places, etc. so that it becomes easier for the customers to get all the information at one place.
- ii. Today's customers are tech savvy so the new technologies and tools have positive impact on travel related information. So it is important for the companies to provide correct and proper information about all the places.
- iii. Among all the travel websites Make My Trip is the most used travel website. So Make My Trip should try to remain the market leader by retaining their existing customers, making the customers satisfied and fulfilling all the needs and wants of their customers.
- iv. Maximum respondents depend on mobile technology for travelling therefore the companies should create various applications of the websites which can be easily accessible from the mobile devices. This will help the customers get all their information on their fingertips.

v. The companies should initiate the customers to write reviews on their websites by providing any additional benefit per review. The customers use social media a lot so the companies should make social media influencers as their brand ambassadors and ask them to promote their website to increase the web traffic.

## Conclusion

Technology has transformed each and every phase of the travel and tourism industry from finding a hotel, to check in process and also to unlock the door and other personalizing activities. Price comparisons across platforms also guarantee an economical trip and artificial intelligence (AI) in the form of chatbots provide on-demand 'human' assistance.

It is evident that the generations are becoming more and more attuned to surfing for the needs rather than to physically look for them. The profit margins and the expenditure on marketing and advertising campaigns have reduced substantially, this has made it possible for some of the hotels to pass on the benefit to the customer and increase their business share in an industry that is highly competitive because of the power of the social media and the internet possibilities. The Online Travel Market Size in 2021 is USD 354.25 Billion. The projected market size in 2028 is USD 1835.7 Billion. Condor Ferries published some very **interesting stats on online travel bookings(OTA)**:

- 70% of travellers use smartphones for travel research.
- 33% of travellers plan their trips with the help of a virtual travel assistant.
- 82% of 2018 travel bookings were made without a travel agent .
- 66% of all travellers make their bookings online.
- 80% of travellers rely on reviews on TripAdvisor before making bookings.
- Travel technology is definitely on the rise, and the OTA market share confirms that we are slowly going towards a fully-digital future.

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## **Post COVID impact on Indian IT sector in the Global ERA**

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### **ABSTRACT**

Information Technology (IT) is a business sector that deals with computing, including hardware, software, telecommunications and generally anything involved in the transferring of information or the systems that facilitate communication. IT also includes the management of data, whether it is in the form of text, voice, image, audio or some other form. It can also involve things related to the Internet. This gives IT a whole new meaning, since the Internet is its own arena. IT involves the transfer of data, so it makes sense that the Internet would be a part of IT. IT has become a part of our everyday lives and continues to rise into new sphere.

Information technology can help the global businesses to increase revenue. The attractive website's and electronic commerce can make the company to have competitive advantage. The boost in IT sector leads to tremendous growth in the globalisation.

The unexpected Covid-19 pandemic disturbed the whole economic and social life globally. Many service industries' like travel & tourism, media & entertainment, hospitality services, health care centres, construction & real estate industry, finance industry etc. have been affected positively or negatively due to pandemic.

While the unforeseen situation slowed the economy but IT firms continued on their growth line, offering solutions and innovations for domestic and global dependents.

This paper examines the post covid impact on Indian IT sector globally by using secondary data pertaining to the post pandemic scenario globally.

### **KEYWORDS**

Information Technology, global businesses, pandemic, service industry's

### **Introduction**

The Information Technology (IT) industry is an indispensable component of the technology-driven knowledge economy of the 21st century. Worldwide India has been recognized as a knowledge economy because of its impressive growth in IT industry. The role of IT in India's economic development has been crucial. The IT industry mainly involves IT services, IT-enabled services (ITES), e-commerce (online business), and Software and Hardware products. This industry is also instrumental in developing infrastructure to store, process, and exchange information for necessary business operations and other organizations. Also, IT-based services and products have become indispensable for booming any business enterprise and achieving success.

Information Technology not only contributed to the economic development of the country but has also made government more responsive and efficient. Information technology in India has also made the management and delivery of government services like consumer rights, health services, etc. became more effective by improving transparency.

The massive improvement in the IT industry and liberalization policies such as reducing trade barriers and removing import duties on technology products by the Government of India are instrumental in the development of this industry. Also, several other government initiatives like setting up Software Technology Parks (STP), Special Economic Zones (SEZ), Export Oriented Units (EOU), and Foreign Direct Investment (FDI) have facilitated this industry in attaining leading position in the world IT industry.

### **Objective of Study**

- To analyze and study the post covid impact on Indian IT sector in the global world.
- To study the rise in IT sector after covid also increased career opportunities in various fields of IT for the youth.

### **Methodology**

This study has made use of secondary data to collect information with respect to emerging IT world and its impact on globe through rise in employment opportunities, increase in National Income and Trade.

### **IT in the Pandemic Era**

As the whole world was battling with COVID-19 pandemic; the economy gets badly disturbed but the Indian IT industry is still delivering positive signs. Also, it has the potential to overcome this exceptional disaster. Moreover, it has arisen as a global economic force and a major contributor to the Indian economy especially and the world in general.

Even after all this, compared to many other industries, the IT industry is expected to have an enormous market boom from US\$ 131 Billion in 2020 to US\$ 295 in the next five years by 2025. The main reason for this increase in the economy for this industry is the increased demand for software and social media platforms such as Google Hangouts, WhatsApp Video call, Zoom, and Microsoft Teams etc.

With all pandemic disruptions, the whole ecosystem tends to grow, which also provides platform for younger innovators and entrepreneurs.

### **Digital Makes a Difference**

- Students, institutions adopted e-learning tools to continue the curriculum without any hindrances
- Offices shifted entire processes online, enabling staff to execute projects safely from home
- People used e-commerce extensively to purchase groceries and essentials, and apps to have food delivered home
- People used net banking and digital wallets for financial services
- Families and friends connected over social media and video conferencing apps
- Citizens booked slots for swab collection and availed Covid vaccines on dedicated platforms

### **Blooming Opportunities in the IT industry**

Due to the coronavirus, a lot of opportunities opened up in the IT industry, such as the growing need for the 5th generation (5G) technology. This will help increase connections that support the primed remote interactions. This has become the top priority for many organizations due to the pandemic. Telehealth is one of the developing industries in the crises. This could help people to get diagnosed, treated and operated with the need of a physician to be physically present. A lot of apps have been built in the past few months to help achieve this. There are many patients who are in self-quarantine

who need medical supervision and medical assistance every day, and these applications could help them to achieve that.

## Growth of leading IT Industries Pre and Post Covid-19

### • TATA consultancy services

In the past 5 years, sales have grown by over 10%. Net profit in the same period grew by 8%.

#### *Financial Snapshot of the TATA consultancy services*

Particulars (Rs. in m)	FY18	FY19	FY20	FY21	FY22
<b>Total Income</b>	12,67,460	15,07,740	16,15,410	16,73,110	19,57,810
<b>Growth (%)</b>	4%	19%	7%	4%	17%
<b>Net profit</b>	2,58,800	3,15,620	3,24,470	3,25,620	3,84,490
<b>Net profit margin (%)</b>	20%	21%	20%	19%	20%

For 2022, the highest earning revenue segment of TCS was banking, financial services, and insurance. It earned 39.2% of the total revenue.

### • Infosys

In the past 5 years, sales have grown by over 11%. Net profit in the same period grew by 9%.

#### *Financial Snapshot of Infosys*

Particulars (Rs. in m)	FY18	FY19	FY20	FY21	FY22
<b>Total Income</b>	7,38,330	8,55,570	9,41,050	10,30,190	12,39,360
<b>Growth (%)</b>	3%	16%	10%	9%	20%
<b>Net profit</b>	1,61,000	1,54,100	1,66,390	1,94,230	2,21,460
<b>Net profit margin (%)</b>	22%	18%	18%	19%	18%

For 2022, the highest earning revenue segment of Infosys was financial services. It earned 32% of the total revenue.

## Findings

In Post pandemic there is a tremendous growth in IT sector not only in India but throughout the world. Due to development in various application software and innovations in technology employment opportunities have increased rapidly. Instead of struggling physically for various services people have become handier with the use of latest technology.

Entrepreneurs and innovators are working hard to meet the people demand by developing or updating various software's. In short, IT sector is growing enormously in the globe which will positively affect on the economic development.

## Conclusion

The future belongs to India with a great share of work from different parts of the world and the placement of Indian experts across the world. Thus, the role of IT in India's economic development is crucial. The central government has started a transformation process in the education sector which will certainly add value to our graduates not just as job seekers but also as job creators.



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- <https://www.equitymaster.com/detail.asp?date=08/01/2022&story=4&title=Top-5-IT-Companies-in-India-by-Revenue>



## **Impact Of E-Learning On Student Of Junior, Middle And Senior Level, Teacher And Parent Of Cbse Schools In Salalah.**

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### **ABSTRACT**

Online teaching learning process was catering the needs of the students of university and colleges in the form of seminars, webinars and digital resources worldwide since decades but during pandemic every school, colleges and universities around the globe adopted digital method of teaching. This paper is an attempt to study the effectiveness and impact of online teaching learning process on students, parents and teachers of Salalah, small city in Sultanate of Oman with the help of online survey with the designed questionnaire. It also discusses the different Online teaching learning tools, their usage and effectivity.

### **KEYWORDS**

Digital resource, online teaching learning, online teaching learning tools

### **Introduction**

It is observed that innovative and creative teaching always create interest in students and enhance their skill to learn concept easily. During regular classes before Covid whenever teacher had used smart skill to teach some concept whether video, PowerPoint it had affected the learning capacity of the child. But Covid 19 had forced every school and teacher to adopt the ICT method of teaching and had proven that in any circumstances teaching learning process will be ongoing. There are three parameters of virtual teaching process E learning, online learning and digital learning. In digital learning teacher make digital resources and worksheets and share with students through Google classroom. In E- learning instructor use Zoom, Google meet to interact with the students and together this is digital or online learning.

### **Online Teaching Learning Tools**

A plethora of online teaching learning tools are available and that has become a challenge for the instructor to use wisely the best tool to make teaching innovative and creative. Few instructor used Google meet whereas few used Zoom app for online collaboration. Both the system has their own efficiency. For online quizzes Mentimeter, Kahoot and Quizlet were used by teachers for formative assessment. Google forms were used as online class test or assignments. Interactive white boards, Graphic interactive tabs and Wacom Graphic tabs were used to make teaching learning process interactive.

### **Research Methodology**

An online survey was conducted to get the statistical data about the experience of online learning from students, teachers and parent. It aimed to know the factors that might influence the online teaching learning process. Students of junior [Grades 4-5], middle [Grades 6-8] and senior sections [Grade 9-12], parents and teachers from various schools of Salalah participated and answered the question enthusiastically. A quantitative approach was conducted by comparing or finding association between two or three groups and their responses. Chi Squared test is used to test hypothesis with the significance level of 5% and critical value 11.070

## **Objective**

1. To study the effectiveness of online teaching on students, parents and teachers.
2. To compare the effect of stress of online teaching on students and teachers.
3. To study the suitability of environment for teachers, students and parents during online class.
4. To study the effectivity of syllabus structured and delivered in online classes between teachers, parents and students.

## **Hypothesis**

1. H1: There is no significant difference between stress effect of online class on teachers and students.  
Significance level 5 %

## **Limitation of the study**

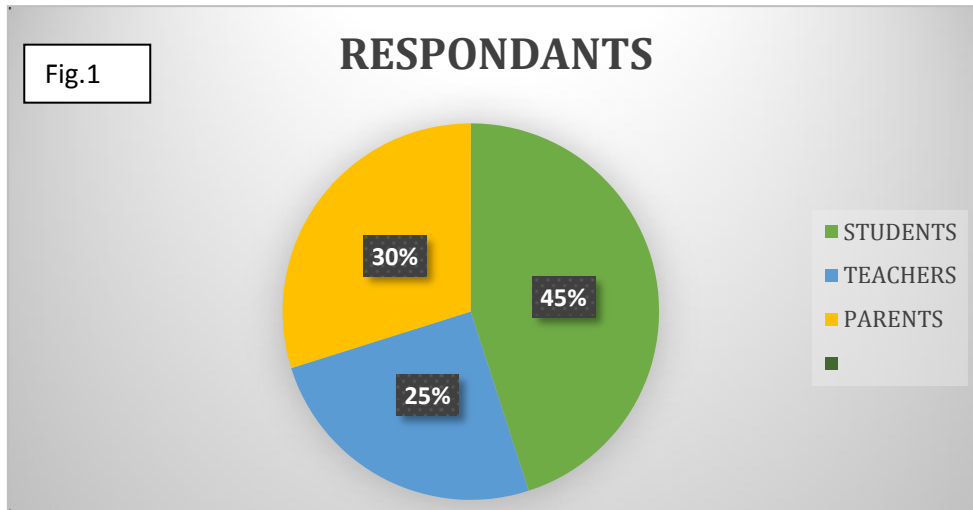
1. This study is confined to Salalah region.
2. This study is limited to CBSE Schools in Salalah.
3. This study is limited to junior, middle and senior level of students of school.

## **Questionnaire <sup>[1]</sup>**

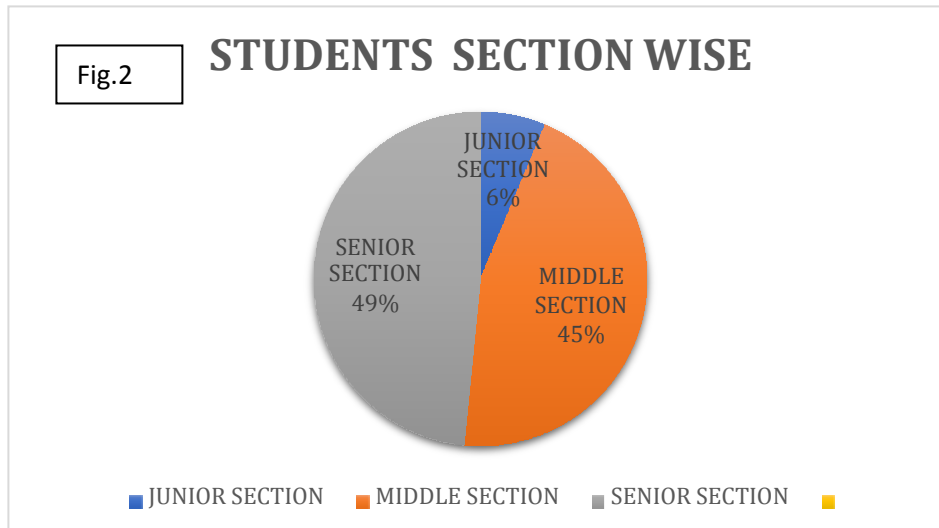
For this survey online questionnaire was used to test the impact of online classes on students, teachers and parents during Covid 19 pandemic in schools of Salalah (City in Sultanate of Oman) Questionnaire was designed to get the idea about their view towards online learning, their availability of devices and how much regular, disciplined and focused they were during online learning. It also tests the difficulties and joy experienced by the teacher to make them understand the concept using digital resources such as videos, PowerPoint, online quizzes and many more. It tries to comprehend the parents experience that how they managed online learning of their ward their own work.

### Outcome of Survey

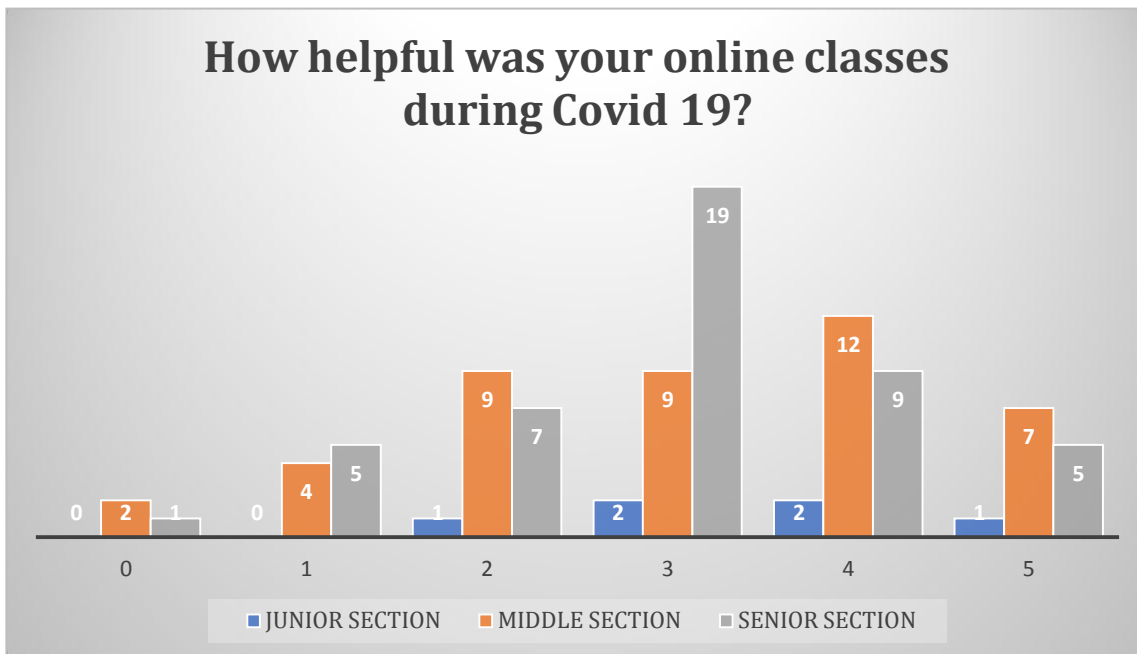
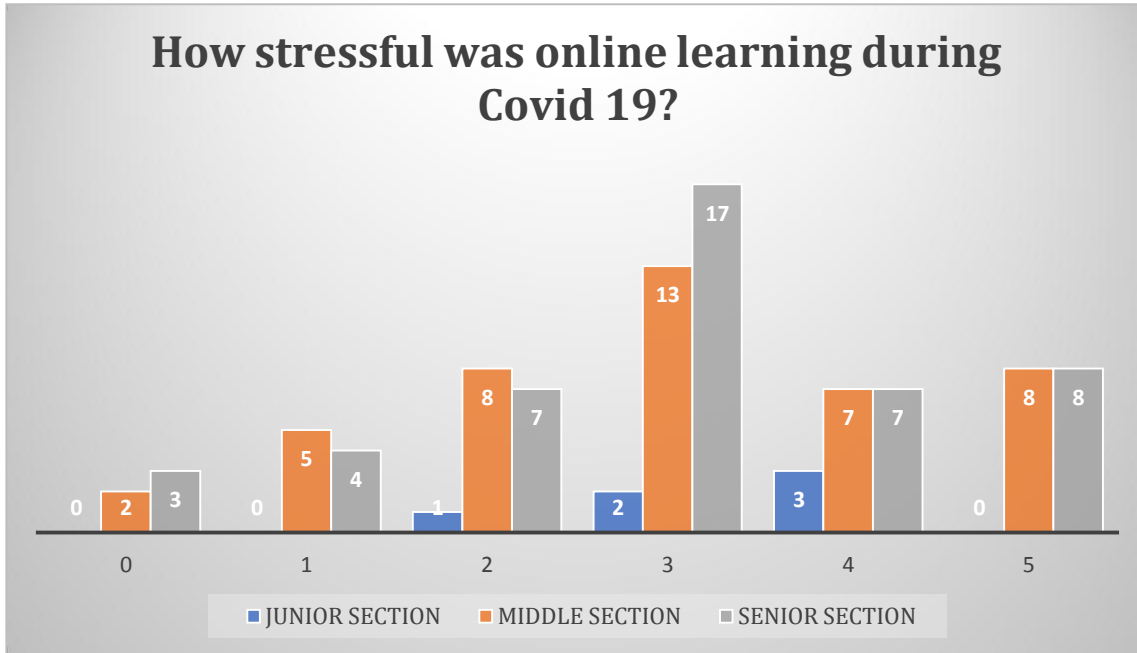
In this online survey 211 people have responded out of which 63 parent, 95 students and 53 teachers gave their response from different school in Salalah see Fig.1.

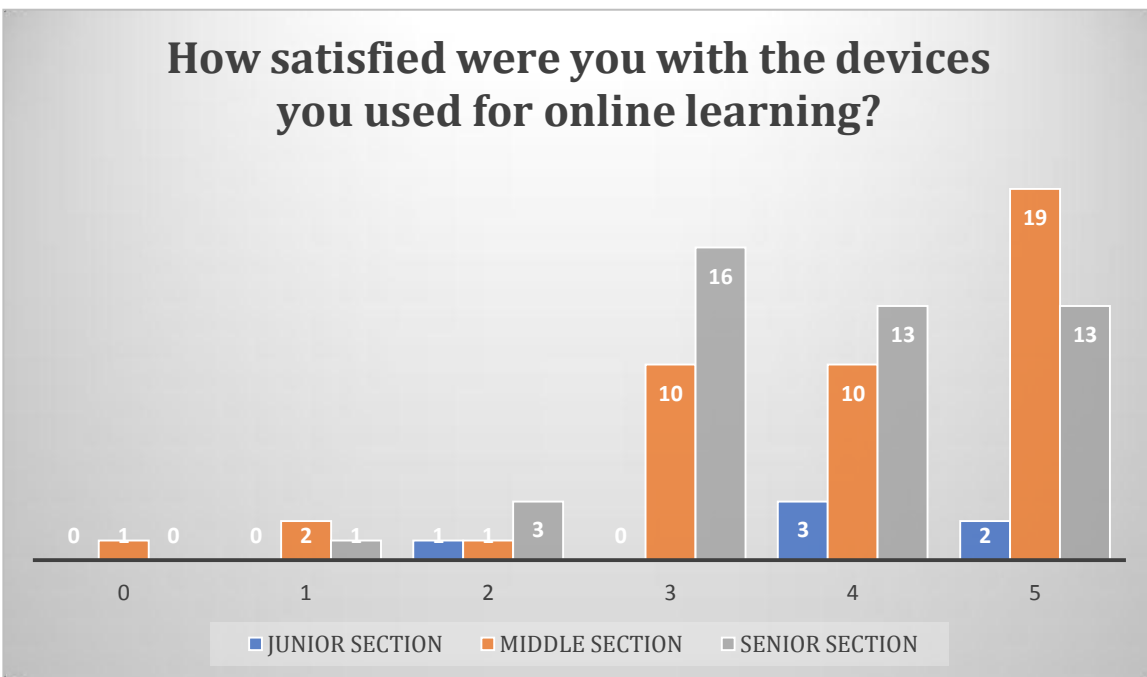
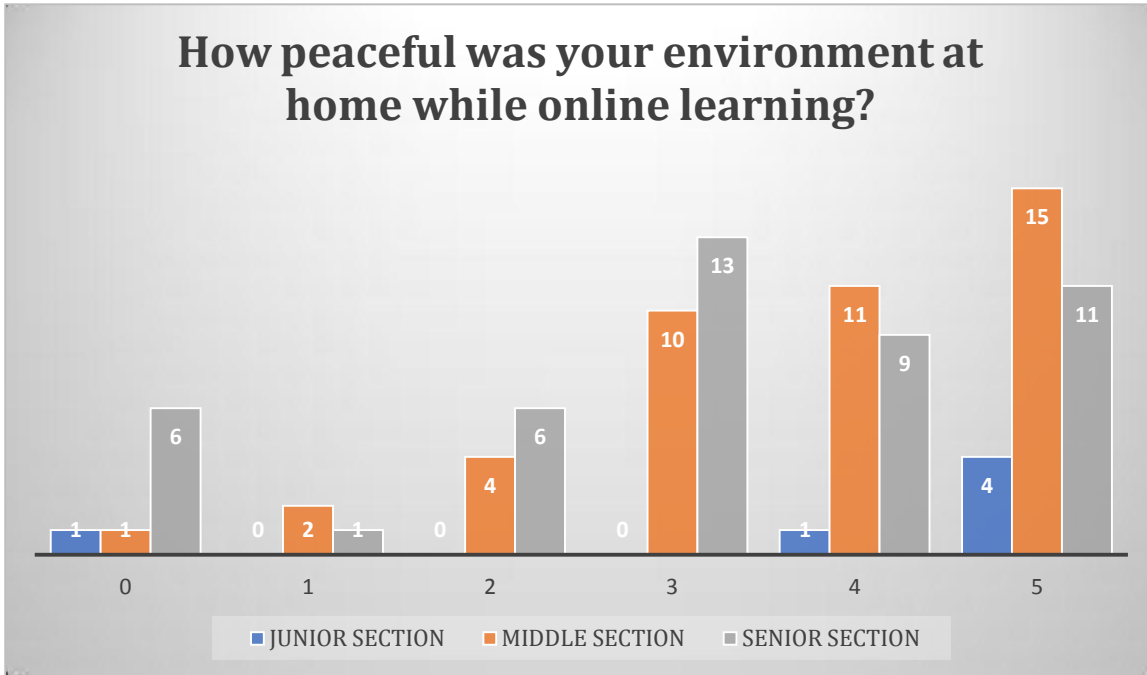


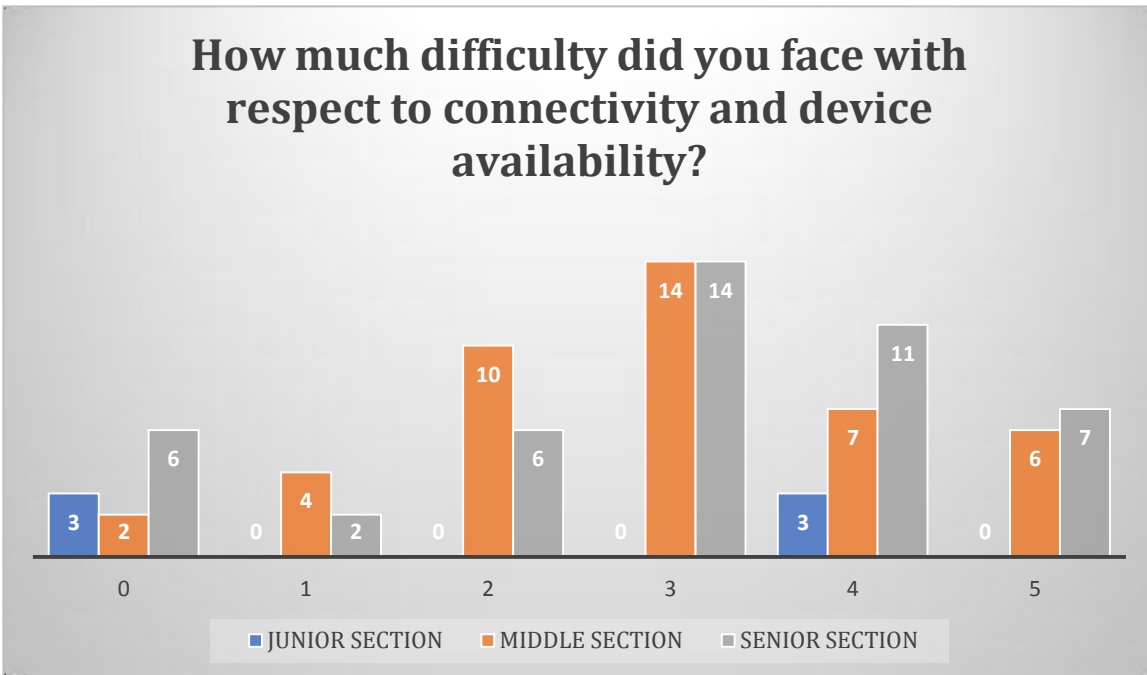
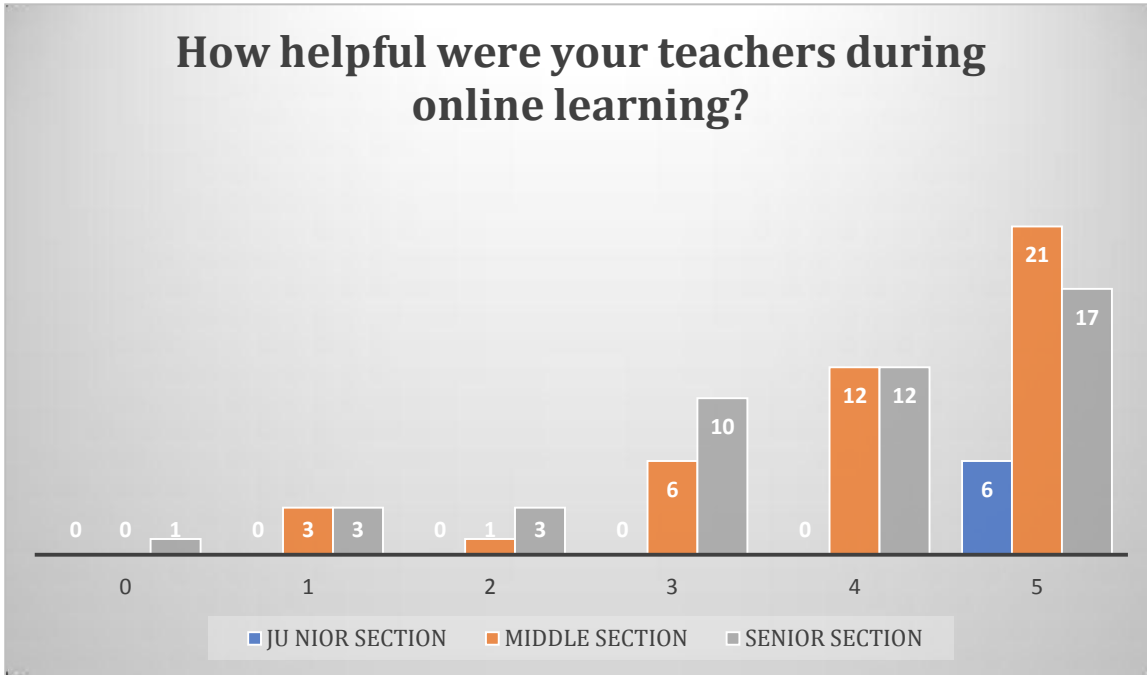
Out of 95 students, 6 students are from junior section, 43 students are from middle school section and 46 students from senior section responded from different CBSE schools in Salalah see Fig 2.

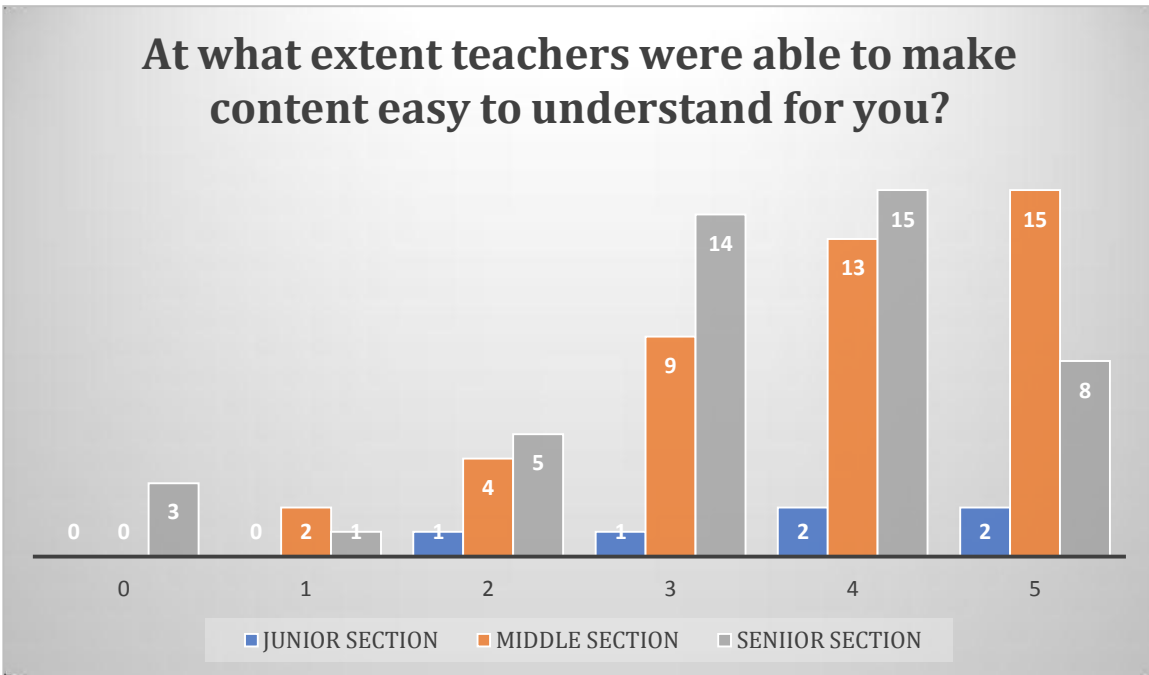
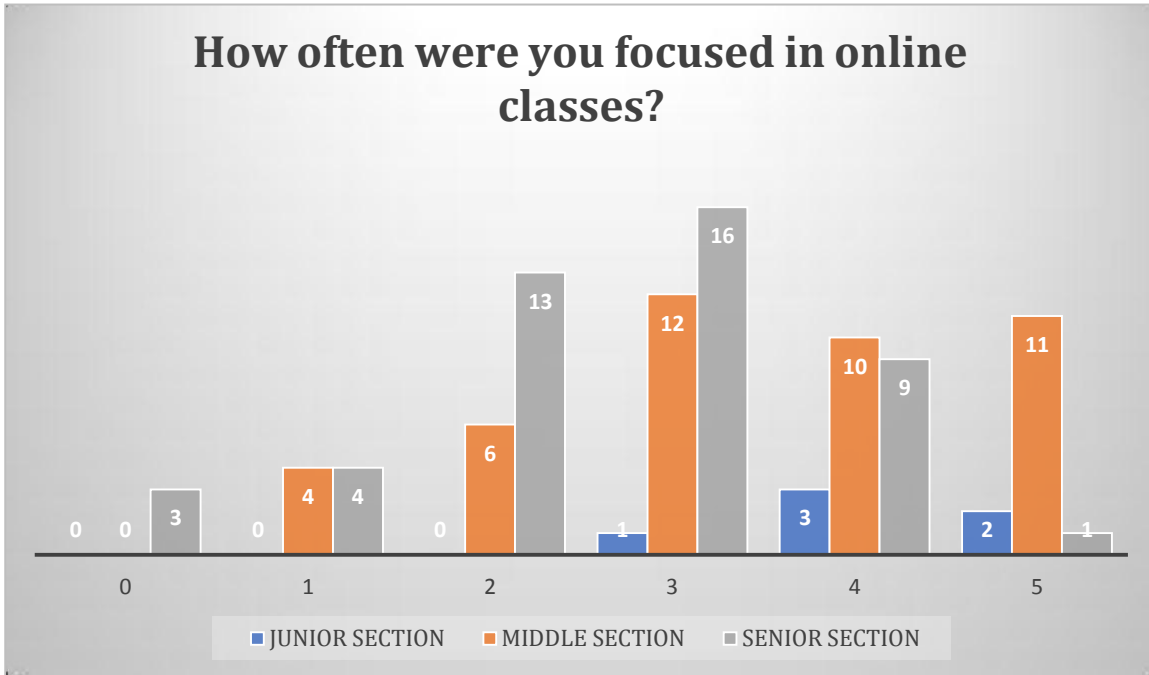


**Responses By students:**



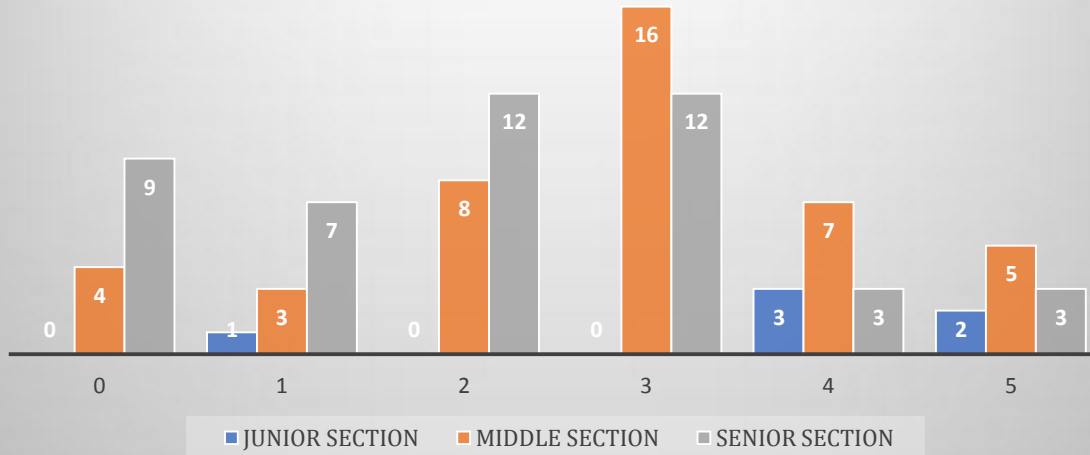




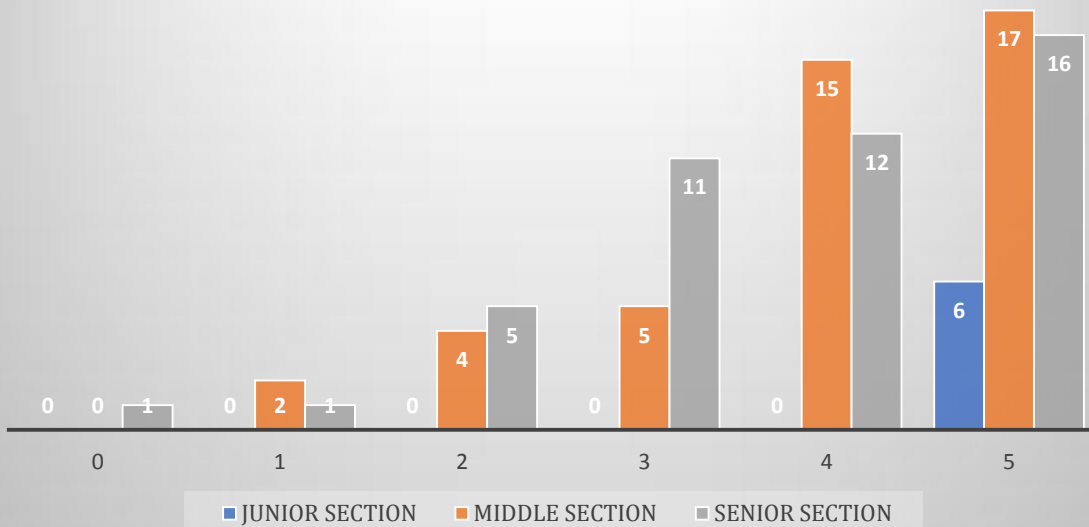




### How eager were you to participate in activities during online classes?

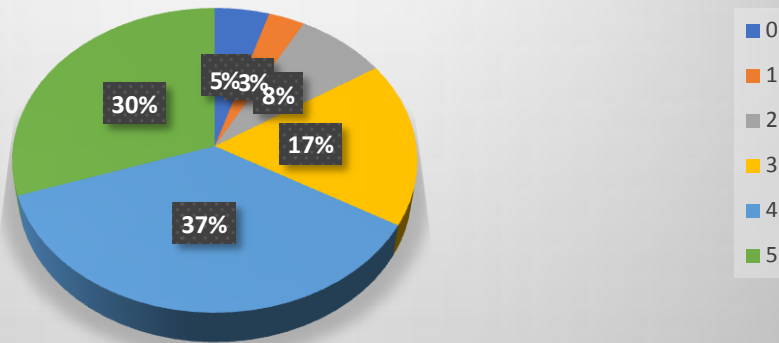


### How often teacher interacted in the class?

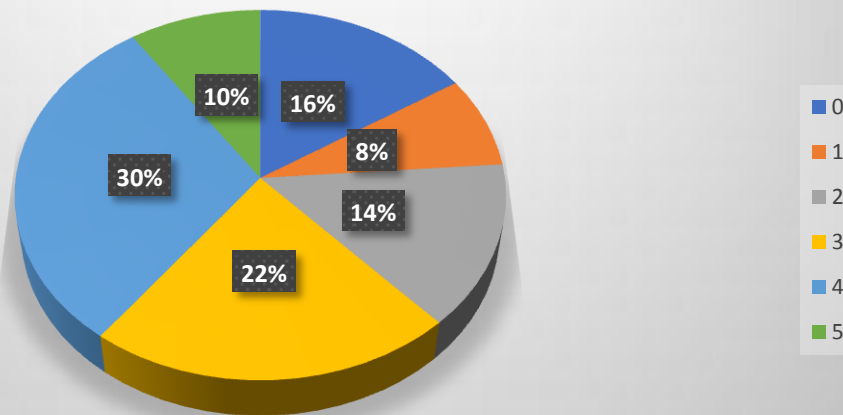


### RESPONSE BY PARENTS

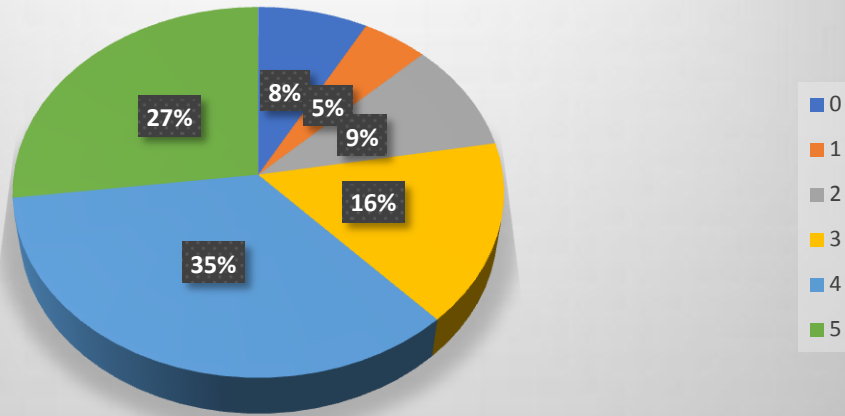
How satisfied are you with the software and platforms used by the teachers for online learning during pandemic?



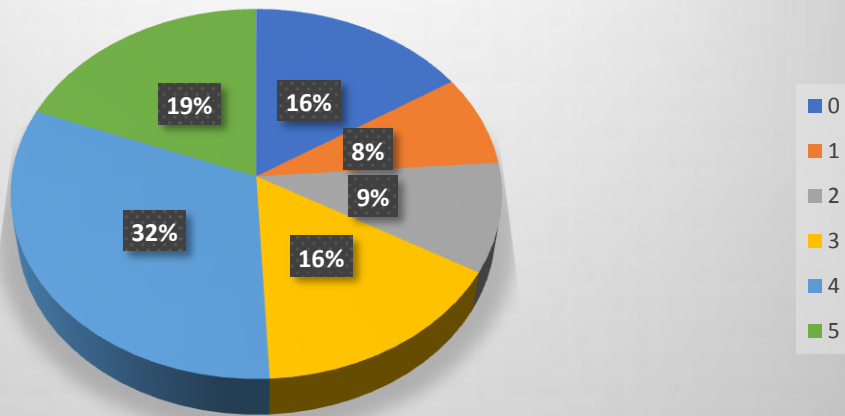
How difficult was it for you to help your child with internet and device arrangement?



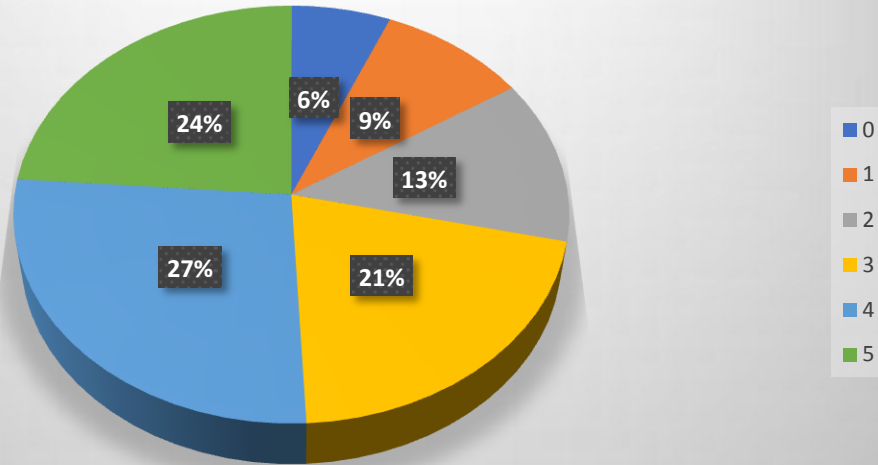
### How satisfied were you with the way syllabus had been structured and delivered?



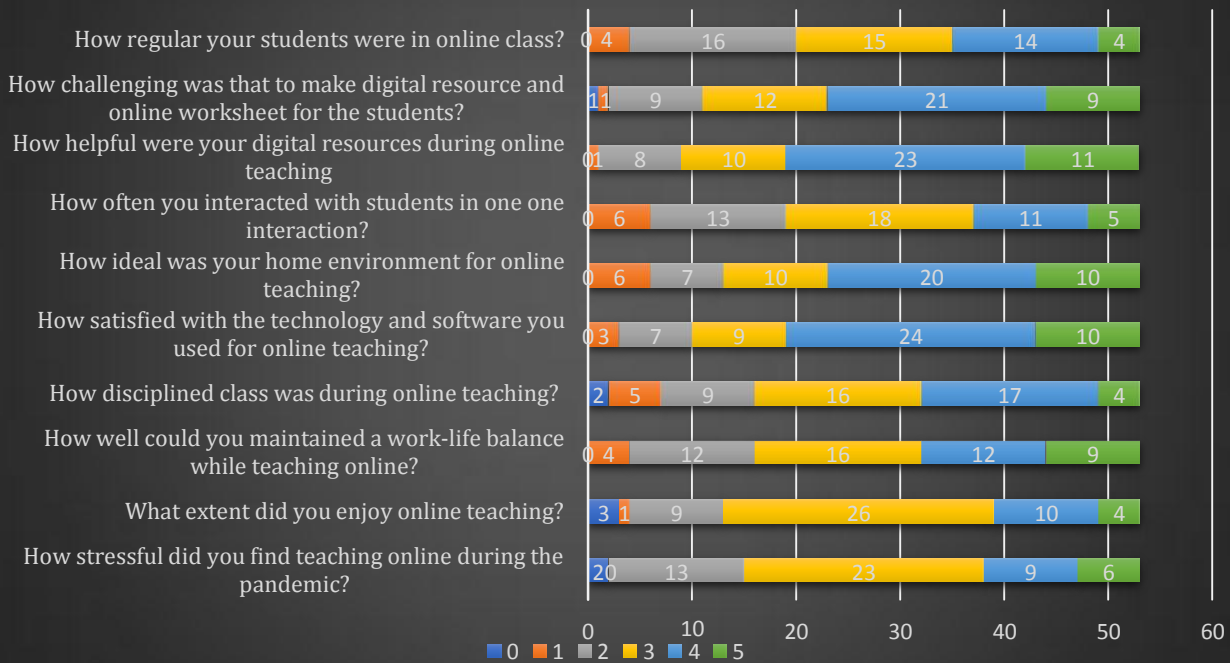
### How difficult was that for you to manage your work and helping child in doing homework and revision?



### In what extent you helped your child to solve online worksheets and revision material?



### TEACHER'S RESPONSE



### Hypothesis Testing<sup>[2]</sup>

1. H1: There is no significance difference between stress effect of online class on teachers and students.

COMPARISON OF STREEFUL ONLINE CLASS BETWEEN TEACHER AND STUDENTS(OBSERVED VALUE=O)							
Response Option/Groups	0	1	2	3	4	5	Row sum
Students	7	9	16	32	17	16	97
Teachers	2	0	13	23	9	6	53
Column Sum	9	9	29	55	26	22	150
COMPARISON OF STREEFUL ONLINE CLASS BETWEEN TEACHER AND STUDENTS(EXPECTED VALUE=E)							
Response Option/Groups	0	1	2	3	4	5	Row sum
Students	5.82	5.82	18.75333333	35.56666667	16.81333333	7.773333333	90.54666667
Teachers	3.18	0	10.24666667	19.43333333	9.186666667	7.773333333	49.82
Column Sum	9	5.82	29	55	26	15.54666667	140.3666667

CHI SQUARED VALUE OF EACH OBSERVATION						
Students	0.6247526817	0.1874526332	0.5249077108	0.549803405	0.9636896918	0.003170881896
Teachers	0.5081563628	0	0.389713682	0.4184719098	0.9508918717	0.5247481526

$$\sum 3^2 = 5.645758983 < 11.070(\text{critical value})$$

Since chi squared value is less than the critical value therefore there is a significance difference between effect of stress during online classes on teachers and students.

### Findings

1. Most of the students were satisfied with the syllabus taught by the teachers using digital resources. They enjoyed online learning though sometimes they were not focused due to online distraction.
2. Peaceful environment was created for most of the students to learn on their own pace with the availability of parents.
3. In spite of parents work they helped the children in their revision and homework assignments.
4. One to one interaction with the teacher helped the children in clearing doubts and queries.
5. Parents also appreciated the sudden switch taken by the teachers from traditional teaching to online teaching. At certain level they were satisfied.
6. In the beginning for the teachers it was really difficult to make resource and present in virtual classroom but then with the time it was beautifully improved.
7. Few students were struggled a lot for connectivity issues and device availability.

## Conclusion

Online survey helped to measure the effectiveness and experience of online learning during pandemic. Outcome of the survey will help the instructor to improve the engagement of the students

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## **Role of Indian Handicraft Industry in the Global World**

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### **ABSTRACT**

The Indian handicraft is known worldwide. It represents style, beauty, rich heritage, and culture of one's country. Handicraft word means crafts made by hands. This industry uses conventional manual methods instead of advanced technology. The handicraft skill is handed down from one generations to next generation in the form of family traditions. India's rich cultural heritage provides unique and huge resources for developing handicraft products. The handicraft industry is considered a decentralised and unorganised industry still it is one of the most important sector in Indian economy for employing more than seven million people from rural & semi urban areas and generating foreign reserves for the country. There is an increase in popularity of Indian handicraft industry because of the increase in country's travel and tourism .This sector is economically viable as it requires low capital investment and gives high value addition and high export potential. In recent times, the change has happened due to many factors which includes government schemes, traders, consumers and the availability of handicraft products on the e-portals. The study of the topic is completely based on secondary data. The purpose of the research paper is to study the strengths, weaknesses, opportunities and threats of handicraft industry in view of its role in the global world.

### **KEYWORDS**

Indian Handicraft Industry, SWOT analysis, Government policies, Globalization, E-commerce.

### **Introduction**

The history of India handicrafts is almost 5000 years old. Indus valley civilization portrays many examples of handicrafts. The tradition of Indian handicrafts has grown since many years, exhibiting its religious and cultural values. The craft of each state of India reflects its richness and diversity through the influences of various empires. The evolution of Indian handicraft had seen various phases of domestic and foreign trade. In spite of all odds the India handicraft industry continue to flourish because of open mindedness of Indian artisan to accept and assimilate new ideas. It is a decentralized and unorganised sector which utilizes the traditional skills of artisans in various crafts such as metal ware, marble & stone, leather works, textile weaving & printing, wooden ware, jewellery etc. Handicraft products are made by human hand without using any kind of advanced technology, machinery or equipment.

Handicraft industry is an employment generator, it is one of the most important sectors in the Indian economy employing more than seven million people.

The industry gives you gender equality through dominance by female artisan, India is dominated by female artisans with over 56% of the total artisan. The country has 744 handicraft clusters employing nearly 212,000 artisans and offering over 35,000 products.

There is an inclusive growth and participation from every corner of country, Surat, Bareilly, Varanasi, Agra, Hyderabad, Lucknow, Chennai, and Mumbai are among the major clusters. Most of the manufacturing units are in rural and small towns, and there is enormous market potential in all

Indian cities and abroad. This sector is economically viable as it requires low capital investment and gives high value addition and high export potential. In India, where manpower is abundant and capital is scarce, the argument for handicraft industry is very strong. Handicraft sector can be setup anywhere in the country and thus can help in removing the regional disparities.

India is one of the major producer and supplier of handicrafts products in the world. Before Industrial development handicraft industry was a potential economic advantage for the country. Handicrafts not only represents country, but also provides earnings for the country. A large income source of foreign reserves is through handicraft products.

## Objectives of the Study and Methodology

- To study the impact of globalization on handicraft industry in India.
- To do a SWOT analysis of the Indian handicraft industry
- To study the role of government policies and Programs in the promotion and protection of handicraft industry and artisan.

The present study is purely based on secondary sources of data. Secondary data include both quantitative and qualitative is collected from different sources, including various websites, used for the purpose of study

## Indian Handicraft

Handicrafts from India are known worldwide. In addition to style, beauty, and rich heritage, it also represents the culture and heritage of one's country. The word "handicraft" refers to crafts made by hand. Rather than using advanced technology, this industry relies on conventional manual methods. In the form of family traditions, handicraft artisans passed on their skills from one generation to the next. As a country, we are so blessed with diversity that it is no wonder the phrase 'unity in diversity' is so apt. Indian handicraft industry exhibits a diverse nature due to the unique products of each state. Due to its decentralization, the entire industry is spread over the entire subcontinent, both rural and urban. A large portion of the Indian handicraft industry is classified as a cottage industry

## Some Popular Categories of Indian Handicrafts

**Pottery:** Manufactured mainly by the potters and artisans of Kutch, Alwar, Jaipur, Saurashtra, Bikaner, Kangra, Khujra, Hapur and Meerut, this form of handicraft involves shaping pottery clay into an interesting and utilitarian range of pottery.

**Stone Craft:** This form of handicraft involves moulding of various stones through grinding, cutting and finally polishing them into varied forms of stoneware, candle stands, lampshades etc., a hallmark of the handicrafts of Bihar, Varanasi, Tamil Nadu, Agra and Vrindavan.

**Terracotta:** The art of baking clay into an excellent range of receptacles like jars, small utilitarian furniture, figurines and jewellery.

**Woodcraft:** This handicraft involves art of exquisite carving of various wood types into wall hanging plaques, furniture, idols, etc. mainly practiced by the artisans of Jammu, Kashmir, Uttar Pradesh, Gujarat, Karnataka and Kerala. The woods used range from sandalwood to teakwood and shisham.

**Hand Crafted Jewellery:** This is a handicraft that requires tremendous skill. It involves carving of a conspicuous range of jewellery using stones ranging from pearls to amethyst, an undisputed example of the creative calibre of Indian craftsmen. Both precious and semi-precious stones are used in this form of handicraft.



**Textiles:** The textile based handicrafts of India are simply fabulous which can be attributed to their skilful weaving, vivid colour schemes and innovative designs. The fascinating range of hand woven fabrics include muslin and Indian silk, while some excellent examples of hand printed fabrics include block or screen painted fabrics, kalamkari and batik.

**Cane Handicrafts:** This form of handicraft involves creating a matchless range of furniture fashioned from cane by the Indian craftsmen that are utilitarian, trendy yet reflects the spirit of rural India. Moonj is also used in this handicraft. Baskets weaved from moonj need a special mention.

**Carpets and Durries:** This form of handicraft basically deals with floor coverings. Because of their matchless weaving, vivid colour patterns and inimitable designs, these carpets are of great demand in the global market. Floor coverings fashioned out of durries and jute are also a part of this handicraft and are extensively noted for their elegance.

### Local to Global Globalization of Indian Handicraft Industry

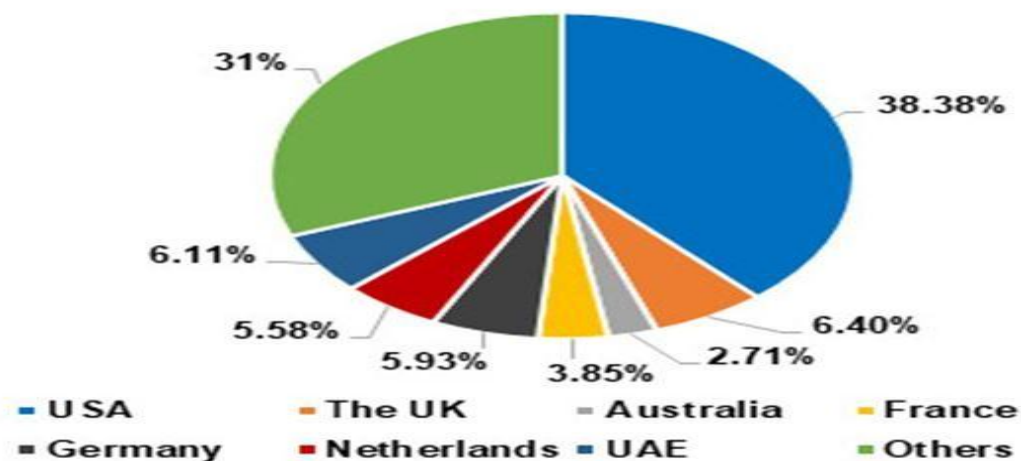
During 2021-22, the total exports of Indian handicrafts were valued at US\$ 4.35 billion, which was 25.7% increase from the previous year. Over the past three years, the export of handmade goods, especially carpets, has grown steadily. India accounts for roughly 40% of global exports of handmade carpets.



Source: Export Promotion Council for Handicrafts (EPCH);  
 \*Data excludes export of carpets

The largest carpet export destinations for India are USA, Germany, the UK, and Australia with a share of about 57%, 6%, 5% and 5%, respectively. UAE is one of the major buyers of hand printed textiles, embroidery goods and art metal ware. Hand printed textiles, imitation jewellery, embroidery items, and art metals are popular purchases in Germany and the country purchased carpets worth US\$ 116.64 million in 2021-22.

### Country-wise share of India's handicraft exports (2020-21)



Source: Export Promotion Council for Handicrafts (EPCH)

### Swot Analysis of Indian Handicraft Industry Strength

- The availability of unique local raw materials such as bamboo, cane, horn, jute, leather, etc.
- Unique and exclusive handicrafts produced by a rich and diversified culture.
- There is a strong pool of skilled artisans already in place.
- The ability to apply indigenous knowledge to a wide range of traditional production skills.
- Women, youth, and people with disabilities have a high potential for empowerment.
- The cost of production is low

### Weakness

- Lack of design, innovation and technology up gradation.
- The industry is highly fragmented
- Unstructured and individualized production systems.
- There is limited information about export trends, export opportunities and export pricing
- A limited number of production, distribution, and marketing resources.
- Producer groups have limited expertise in e-commerce.
- Lack of infrastructure and lack of the latest technology

### Opportunities

- A greater emphasis is being placed on product development and design upgrades.
- In the domestic and traditional markets, demand is rising.
- The products are been appreciated by developed countries
- Support from the government and interest in preserving the craft.
- Emerging markets in American and European countries.
- The industry uses fair trade values
- There is an increasing flow of tourists providing a market for products.

## **Threats**

- Several state governments do not mainstream the handicrafts sector into their planning priorities.
- There is a rise in increasing threats from Asia countries
- The supply of good quality raw materials is decreasing.
- Other countries have better quality components, findings, and packaging.
- There is lack of quality standardization process.
- High freight costs associated with air cargo and shipment.
- High cost of production rendering Indian crafts less competitive in the markets.

## **Government Initiatives**

### **National Handicraft Development Programme (NHDP)**

The important component of this programme is carrying out surveys, upgrading design and technology, developing human resources, providing insurance and credit facilities to artisans, R&D, infrastructure development and marketing support activities

### **Comprehensive Handicrafts Cluster Development Scheme (CHCDS)**

CHCDS aims to assist artisans and entrepreneurs in establishing world-class units with modern infrastructure, cutting-edge technology, adequate training and human resource development inputs, market linkages, and production diversification.

### **Export Promotion Council For Handicrafts (EPCH)**

The EPCH was established under the Companies Act in 1986-87. The main objective of the council is to promote, support, protect, maintain and increase the export of handicrafts. The other activities of the council are knowledge dissemination, providing professional advice and support to members, organizing delegation visits and fairs, providing liaison between exporters and the government and carrying out awareness workshops.

## **Conclusion**

As India has opened her doors to the foreign companies during the era of economic reform and liberalized market, the global village is now a reality

Globalization is 'blessing in disguise' for the handicraft industry and artisans in India it has opened the new international markets for the handicraft products

The Indian handicraft industry is able to compete with countries like China, Philippines, Thailand, Taiwan, and Korea that produce mostly machine-made products

Government policies and programme would definitely help Indian handicraft industry to become market leader in the world

Indian handicraft products have created a niche market all over the world which has given distinct impact through its exclusive designs and creativity.

With increase in the trends in digital marketing & E-commerce are emerged as promissory distribution channels to market and sell the craft products.

The rise in demand from the new emerging markets as well as the consistency in the demands of the existing markets will definitely help to increase the Indian handicrafts world wide

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## **Role of National Education Policy in India's ascent to become Global Power**

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### **ABSTRACT**

Education is the basis of socio-economic growth of a nation. High quality education creates talented and skilled human resources for a nation to develop an equitable society. A nation can realize its economic presence worldwide over by providing inclusive high-quality education to all its citizens. There are some Asian countries who have achieved significant development by doing the reforms in education. The paper briefly discusses case study of successful education reforms of Asian countries. This paper investigates the role of national education policy (NEP) on India's rising as a global power. This paper also studies how NEP can help India's continuous effort to maintain its leadership position in terms of cultural preservation, national integration and social justice on a global platform.

### **KEYWORDS**

National education policy, economic growth, skilled, equitable society

### **Introduction**

Education is the fundamental right of any individual to develop intellect, skills, values and knowledge for leading a healthy, wealthy and socially committed life. For a nation, it is the basis of socio-economic growth. A nation can create a talented, skilled and globally competent workforce by providing inclusive high-quality education to all its citizens. This kind of workforce helps a nation to reduce poverty and create a developed, healthy and equitable society. For a nation like India with the highest number of the youngest population in the world, this kind of workforce will propel its pursuit of become a global power. India Skills report 2015 indicates that, there exists a wide skill gap among the workforce across India and requirement of the industry. To bridge this gap, new reforms are required in the present education system of India.

### **Effective Education Reforms in Asian Countries**

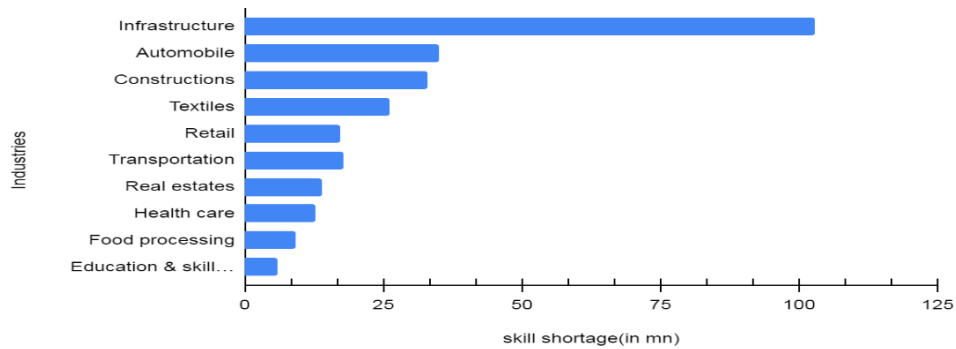
About 30 years ago, Vietnam was considered as one of the poorest countries in the world about now it has immerge as a middle- income country in southeast Asia. This transformation happened due to Vietnam's socio-economic development strategy from the period of 2011-2020 in which education reform was the predominant part of this strategy. Vietnam has a successful long-term implementation of education reforms in all levels - primary, higher secondary, university.

Another Asian country is South Korea, known for its high standard education worldwide. South Korea achieved this excellence in the education sector by using government funds and private investment judiciously. Its long-term implementation of education reforms and zeal for academic success helped in growing its economy rapidly.

### **Significance of National Education Policy**

The past education reforms in India were in 1968 and 1986. The National education policy of 1986 was further modified in 1992. After this reform, the major step India has taken in the field of education is the Right of children to Free and Compulsory Education Act 2009. All these past reforms and development in education only address the issue of access and equity. There are many other schemes of the government related to educational reforms such as Sarva Shiksha Abhiyan, Beti Bachao Beti Padhao, National Program on Technology Enhanced learning etc. But the present

education system and these initiatives are not able to produce a talented and skilled workforce for the present job market. The fig 1 depicts the shortage of skill in different industries as per the India’s skill report 2015.



**Fig 1: Skill Shortage in various Industries**

To revamp the present education system the Union cabinet of India had introduced a New Education Policy 2020 on 29 July,2020. This policy has a complete plan for primary education to higher education as well as vocational training in both urban and rural India. The target of this policy is reformation of the present education system by 2030.

**Role of NEP in India’s Ascent to Global Power**

The NEP modified the school structure from 10+2 to 5+3+3+4. In this structure a strong foundation for Early Childhood Care and Education (ECCE) from age 3 is incorporated. 85% of the child’s brain is developed before the age of 6 years. Understanding the importance of this age period, provision is made for quality education development and care to all children of the age group of 3 to 6 years by 2030. This provision is one step forward towards inclusive quality education. Significant investment will be made in ECCE to achieve strong outcomes in the area: literacy and numeracy, development of communication and cognitive development of children. This makes the foundation of education strong.

Local language or regional language will be the medium of instruction up to grade 5. Multilingual education promotes regional languages, tradition and culture among students and at the same time children are able to grasp the concept in their regional language fast. Under NEP, e-content in different languages will be proposed and also the proposal for setting up of an Indian Institute of Translation and Interpretation (IITI). This also promotes diverse culture and tradition among young minds of India.

Under NEP, Vocational courses will be implemented at the early school level and higher education level in a phased manner. This will utilize the full potential of India .50% learners from school and higher education will be exposed to vocational education by 2025.

Higher education plays a vital role in the development of a nation. Colleges and universities will offer 4 years undergraduate programs with multiple entry and exit. Multidisciplinary research universities are introduced in higher education levels to revamp India culture and tradition of producing the innovative and talented workforce for transforming the economy of the nation.

The demand for professionals in the areas of Artificial intelligence, machine learning, big data analysis, nanotechnology, biotechnology, genomic studies and neuroscience are increasing . To take a lead position in this area, professional courses based on this area will be introduced at undergraduate level. The measures and policies will be taken to bridging the social and gender gap in all levels of the Education system.

India has a special place in the world due its cultural and traditional diversity. To create awareness about the culture and tradition of India among young minds, all kinds of art forms of India will be part of the school level of education.

## Conclusion

Education has a key role to play in the economic growth of a country. As in the case of Asian countries like Korea and Vietnam, the long-term strategic reforms in the education sector lead to economic growth. India skills report 2015, suggest that India is lacking in skilled workforce. So, India required a new education policy to reform the existing education system with a cause to uplift the quality of education to international standards. NEP 2020 with this vision to provide high quality education to all and deep rooted in Indian ethos will be able to produce a skilled workforce which will propel its pursuit of becoming a global power.

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## India Today: Impact of Digitalization on the Food and Beverage Industry

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### ABSTRACT

Digitalization is the new ERA of changing world economy in the past few years. Each and every venture has to be on a digital platform as it's an integral part of the world population. Traditional media and marketing has been taken over by digitalization. People get personalised service without any intermediaries.

The service sector is one of the largest contributors to India's GDP, accounting for around 54% of the country's GDP. The adoption of digital technology has also resulted in the creation of new business models and opportunities for entrepreneurship, further contributing to the growth of the service sector and GDP.

Digitalization has enabled the service sector to become more efficient and productive, resulting in increased output and higher economic growth. Online marketplaces, digital banking and financial services, and telemedicine have all contributed to the growth of the service sector in India, resulting in an overall increase in GDP.

One of the most significant impacts of digitalization on the service sector has been the rise of online applications on hospitality industry, with the introduction of online booking platforms and the use of social media for marketing and customer engagement. Digital technology has also enabled hotels and restaurants to automate many of their processes, resulting in faster and more efficient services.

Improved communication and transparency has been the biggest advantage of this change. This has helped in removing corruption and smooth working. Also it has resulted in startups.

### KEYWORDS

Digitalization, GDP, Service Sector, Hospitality Industry, Social Media

### Introduction

Digitalization has significantly impacted almost every sector in India, and the food and beverage industry is no exception. With the increasing use of technology and digital platforms, the way people consume food and beverages has changed drastically.

With the rising utilisation of innovation and computerisation, the manner in which individuals eat food and drinks has definitely changed.

The use of smartphones and the internet has led to the rise of online ordering and delivery platforms, making it easier for consumers to access a wider range of food options and for restaurants to reach a broader audience. This has led to increased competition in the industry, as restaurants now have to compete not only with those in their locality but also with those that have a strong online presence.



However, digitalization has also brought many benefits, such as improved customer experience, data-driven insights, and enhanced operational efficiency. In this study, we will explore the impact of digitalization on the food and beverage industry in India and the challenges and opportunities it presents for the F & B industry.

Whenever we say beverage in India, tea comes 1st, which is also known as "chai." India is one of the largest producers and consumers of tea in the world, and the country has a strong tea-drinking culture. Apart from these, we have so many beverage options available in the market.

Also wherever we say any famous food in India, there is a vast and diverse rich culinary heritage. There are many famous and delicious dishes that are unique to different regions of India. But making those at home & satisfying food cravings in a short time has been possible due to the Zomato & Swiggy online food ordering platform.

#### A) Food and beverage online ordering apps Zomato / Swiggy

- **Increased Revenue for Restaurants:** Online ordering apps have helped restaurants expand their reach by enabling them to cater to customers who prefer ordering food online. This has led to increased revenue for restaurants and has helped them stay afloat during tough times.
- **Job Creation:** The growth of food and beverage online ordering apps has led to the creation of jobs in India. These apps have created new opportunities for delivery personnel, customer support, and technology roles.
- **Convenience:** Online ordering apps provide convenience to customers by allowing them to order food from the comfort of their homes. This has led to increased sales for restaurants, which in turn has contributed to the growth of the food and beverage industry in India.
- **Digitization:** The use of online ordering apps has helped in the digitization of the food and beverage industry in India. This has led to the adoption of new technologies and processes that have improved the efficiency of the industry.
- **Growth of Small Businesses:** Online ordering apps have provided a platform for small businesses to reach a wider audience. This has helped small businesses grow and expand their operations, contributing to the economic growth of India.

#### B) Alcohol Ordering Apps Zomato / Living Liquidz

Zomato is a popular food delivery and restaurant discovery platform in India that has recently ventured into the alcohol delivery space. The company has launched a separate platform called Zomato Liquor, which allows customers to order alcohol online from licensed retailers and get it delivered to their doorstep. Zomato Liquor is currently available in select cities in India, including Delhi, Mumbai, Pune, Kolkata, and Hyderabad, among others.

Living Liquidz, on the other hand, is a dedicated alcohol ordering app in India. It allows customers to order a wide range of alcoholic beverages online and get them delivered to their doorstep. The app offers a wide selection of wines, spirits, beers, and other alcoholic beverages from both Indian and international brands. Living Liquidz currently operates in Mumbai and Pune.

Both Zomato Liquor and Living Liquidz are leveraging the growing demand for online alcohol ordering and delivery services in India. These apps provide customers with the convenience of ordering alcohol from the comfort of their homes and offer a safe and reliable delivery service. At the same time, they also help licensed retailers and sellers reach a wider audience, thereby boosting their sales and revenue.

## Literature Review

### 1. How Food and Beverage Companies Drive End-to-End Visibility and Efficient Operations Through Digitization - By Sachin Bhalla

Vice President & Country General Manager, India & SAARC, Secure Power Division, Schneider Electric - Sep 02, 2021

Today's consumer is demanding, sophisticated, and, yes, impatient. Buyers know what they want - and they want it now. For food and beverage producers, this creates an urgent need to become more agile and responsive to market demands. To gain agility, food and beverage producers need to centralise industrial automation systems supported by edge computing networks that place processing and analysis closer to users for real-time tasks. These investments will help them gain visibility across their operations, from the point of intake through production to filling to packaging and shipping. This type of visibility can significantly help improve quality control, avoid contamination, and prevent downtime.

### 2. Technology disruptions transforming the food industry - By Virat Bahri

Cloud kitchens, or food businesses solely focused on ordering are another quite interesting development in the F&B industry post-COVID. Their business model is predicated on being placed in a location with maximum proximity to food deliveries. Around 49% of millennials are now buying groceries online, making them the key driver of this change. Secondly, consumer sentiment is shifting faster in segments with longer shelf life like snack bars and cereals, where 40% of volume is expected to move online by 2025.

### 3. Contribution of Non-alcoholic Beverage Sector to Indian Economic Growth & Atmanirbhar Bharat - By Arpita Mukherjee | Eshana Mukherjee | Vishnu Menon

The non-alcoholic beverage sector contributes significantly to the Indian economy in terms of value addition and job creation. The combined value added to the economy is estimated at INR7,91,539 million from upstream and downstream effect.

### 4. Beverage Industry in India – Some Unknown Facts To Study - By Nishtha Sethi

India is one of the largest producers and consumers of beverages, be it liquor drinks or non-alcoholic drinks. Being at such a level, it is quite expected that the growth of the beverage industry in India will have a significant impact on the country's overall economy. As per a quick report, it is estimated that the gross value of the food and beverage industry in India is nearly about 400 billion dollars.

## Objectives

- To understand the impact of digitalisation on the food & beverage industry in India.
- To analyse the benefits of digitalisation to consumers.

## Scope

The scope of the study is limited to Thane & Mumbai region from the age group of 18 - 60.

## Limitations

Due to time constraints we were unable to visit any F&B factory and we were able to receive a response of 83 people.

## Methodology

To accomplish the point of this study we have used primary and secondary data.. In view of which, secondary data information has been gathered from the web and for primary information we have utilised google structure.

## Significance of the Study

The impact of digitalization on the food and beverage industry in India is significant or several reasons. Firstly, it has led to the creation of new business models and opportunities. Online ordering and delivery platforms have created a new avenue for restaurants and other food businesses to reach a wider audience and increase their sales. This has also led to the growth of the economy, with many individuals now working as delivery partners for these platforms.

Secondly, digitalization has led to improved customer experience and convenience. Customers can now order food from their favourite restaurants at the touch of a button, and track their orders in real-time. This has also increased transparency and accountability in the industry, as customers can easily leave feedback and reviews on these platforms.

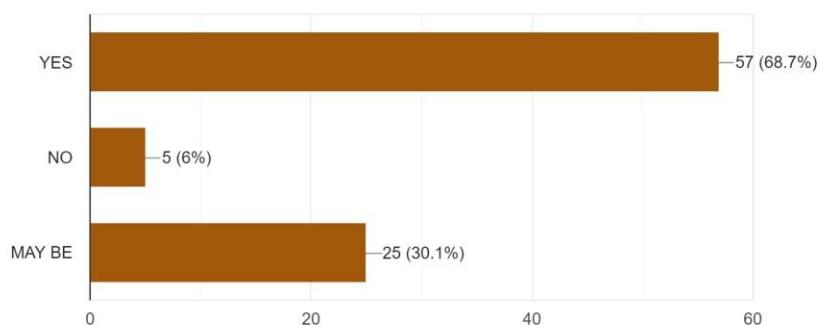
Thirdly, digitalization has enabled businesses to collect and analyse data about their customers, which can be used to make data-driven decisions. This can help businesses to improve their services and offerings, and to personalise their marketing and promotional activities.

However, there are also some challenges that come with digitalization. Increased competition and reliance on digital platforms can create a level of dependency and vulnerability for businesses. Additionally, there are concerns around data privacy and security, as businesses collect and store sensitive customer information.

## Findings

1. Digitalization in food industry resulted in "Farm to Table in Lesser Time".

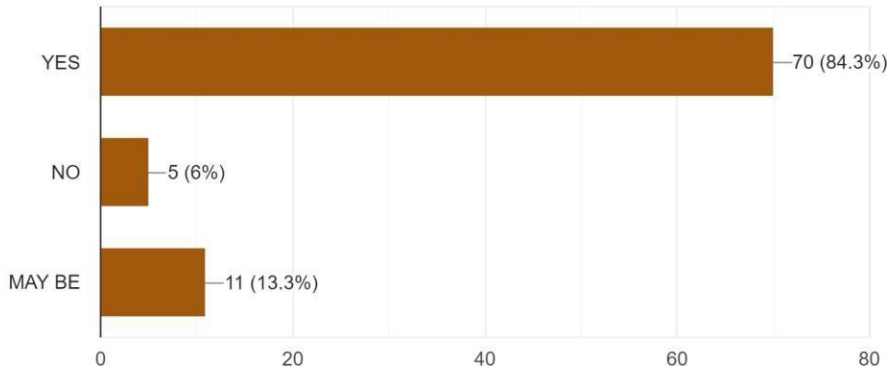
83 responses



68.7% of sample size believes that digitalisation has resulted in getting food in less time.

2. Digitalization has helped connecting food producer & customer around the world.

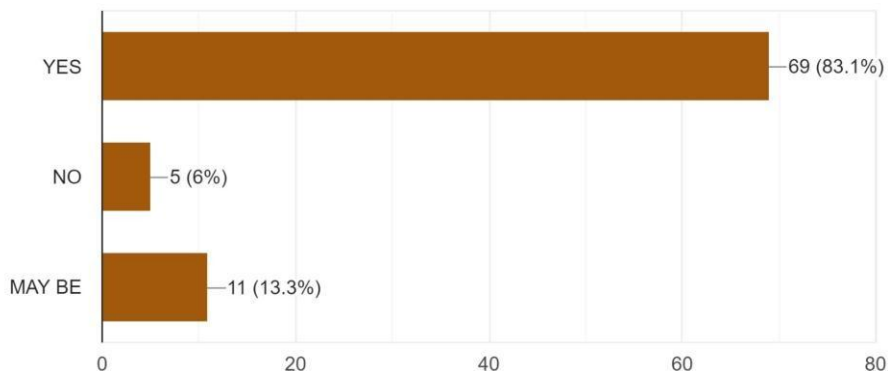
83 responses



Another benefit of digitalisation is that it has connected producer & customer mentioned by 84.3% of respondents.

3. By providing new online ordering systems like Zomato & Swiggy, restaurants are enjoying increased online visibility & sales?

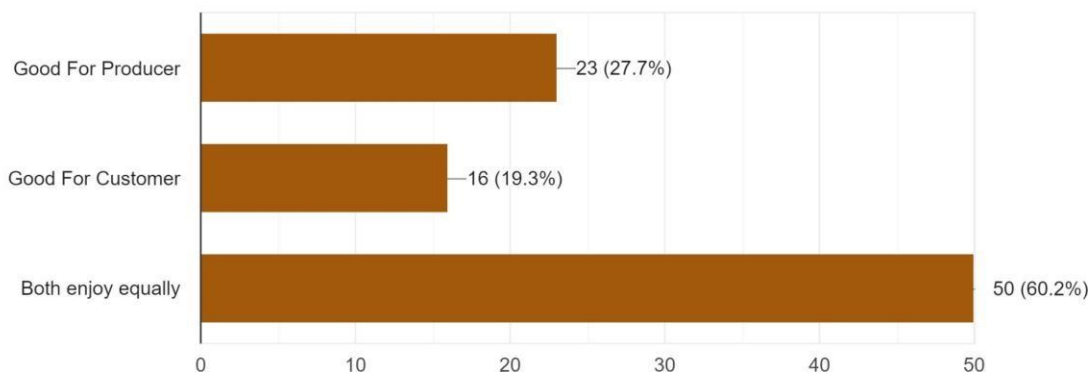
83 responses



Instead of searching for new restaurants or food options on the internet or by peer review 83.1% respondent thinks swiggy and zomato has captured food market.

4. Beverage Industry companies, be they global manufacturers or regional special producers keep an eye on their product yield and quality through automated system.

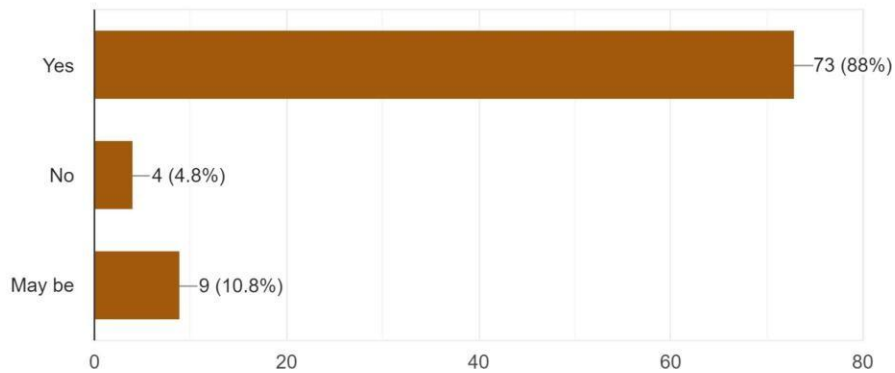
83 responses



60.2% of respondents think automation has helped the beverage industry to keep an eye on their business worldwide.

5. Do you think social media has changed face of food & beverage industry?

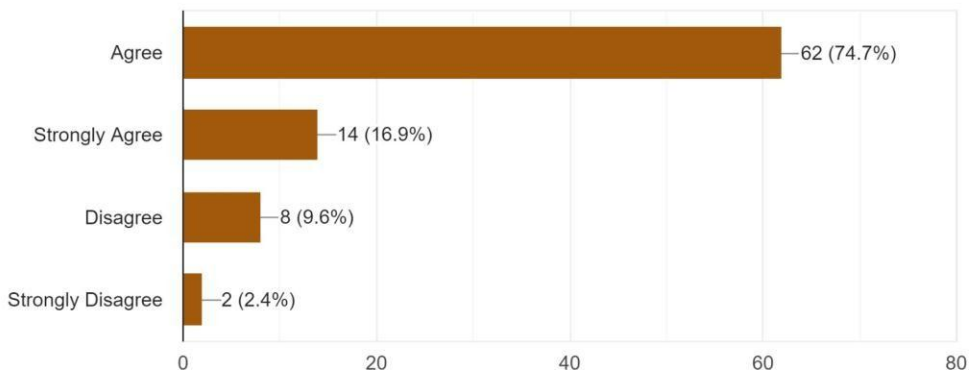
83 responses



88% of respondents think social media trends have changed the face of the food & beverage industry.

6. The core principle of digital transformation is to replace outdated and analog processes with modern, fully integrated technology.

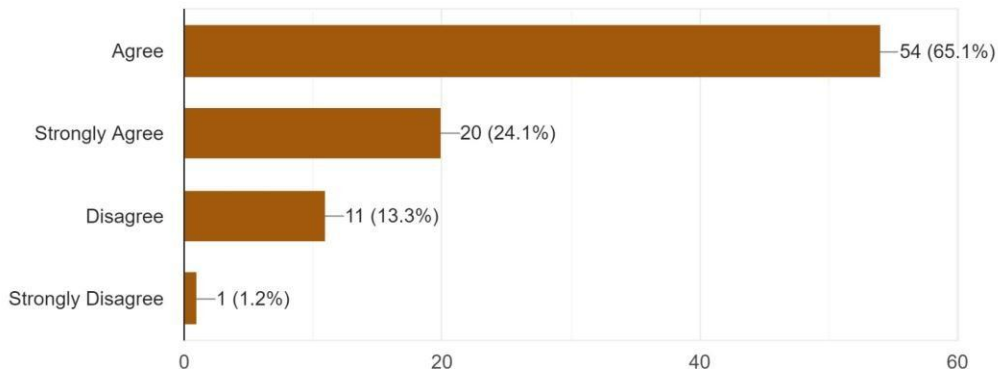
83 responses



Yes 74.7% of respondents says digital transformation will be resulting in fully integrated technology.

7. When stay-at-home orders were issued and transportation delays occurred at the outset of the COVID-19 crisis, food and beverage industry were affected?

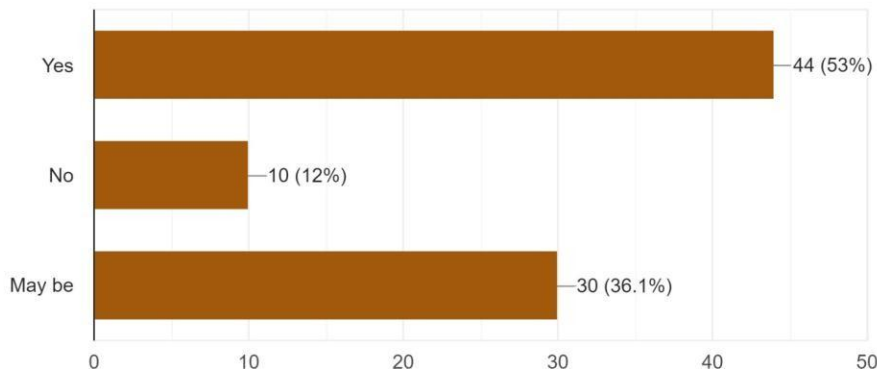
83 responses



65.1% of respondent says Covid - 19 crisis affected F&B industry

8. What do you think the automated machine recipe and formula management features of production factory result in research and develop novel ideas that delight and excite customers?

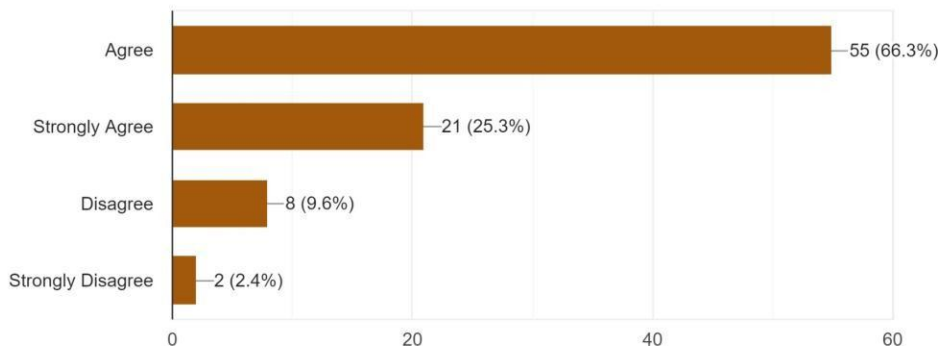
83 responses



53% of people says machine recipe & automation excite customers

9. Digital food payments give customers flexibility and safety in ordering food & beverage via applications.

83 responses

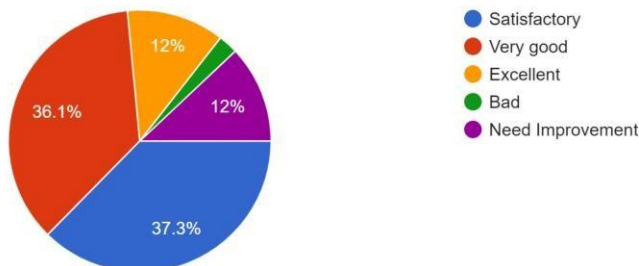


66.3% of respondents says yes digital payment system gives them flexibility and safety while ordering food online.

Yes, due to the fast life cycle everyone is nowadays taking advantage of digitalisation in each form. Which eventually leads to high economic growth.

11. Overall Digitalization in food & beverage industry in India, today's scenario.

83 responses



37.3% of respondents say digitalisation in the F & B industry has been satisfactory.

## Conclusion

Overall, food and beverage online ordering apps have played a significant role in boosting the economic growth of India by creating new opportunities, increasing revenue for restaurants, and providing convenience to customers, data-driven insights, increased competition, improved efficiency, job creation & revenue growth. The study concludes that digitalization has had a positive impact on the food and beverage industry in India. These changes have also contributed to the country's GDP growth, demonstrating the significant role that digitalization plays in the Indian economy. Also, these changes are expected to continue and drive the growth of the industry in the coming years.

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## To Be or Not to Be a Bhartiya Literati: Growth of Indo-Anglican Literature Worldwide

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### ABSTRACT

India has proved to be a rising global power in a wide array of sectors, one of which is literature. Hailing from a land of 22 official languages and around 120 unofficial languages and countless dialects, Indian literature has evolved through various eras, from the era of old English literature to the Romantics and Post Independence writing. Out of these, Indo-Anglican literature, commonly known as Indian English Literature, has grown bloomingly and gained widespread recognition. The current paper focuses on the aforementioned expansion of Indian English Literature and the factors that lead to its widespread recognition and global significance. Through the works of the selected literati such as R.K Narayan, Amrita Pritam, Arundhati Roy, and Khushwant Singh, the researcher intends to portray the impact the kind of literature that these Indian literati produced and the impression it left, not just on Indians but the whole world. It is important to note that this paper is limited only to prose and fiction and does not study the genre of poetry, drama, and non-fiction writing. This study is based on secondary data research and limits its scope only to the field of Indian English literature.

### KEYWORDS

Indian English Literature, global impact, novels

### Introduction

When analyzing India's global development, literature is often missed out on. Literature being of the vastest fields is often overlooked whilst taking an overview of the impact it has caused. Indo-Anglican Literature, also known as Indian literature, is one of the most ancient forms of literature and has been exemplary for the rest of the world. It has emerged as a vibrant and significant literary tradition in recent years, with a growing number of authors achieving international recognition and acclaim. The field has come a long way since its origins in colonial times when English was imposed as a language of administration and education in India. Today, Indian English Literature reflects the diversity and complexity of Indian society, offering a unique perspective on issues ranging from identity and culture to politics and globalization. The research paper aims to explore the expansion of Indo-Anglican literature and its widespread recognition and global significance through a focus on some of the Bhartiya literati.

Literati are well-educated persons or people who are interested in books. The Merriam-webster dictionary defines them as persons interested in literature or the arts. The paper focuses on the works of Bhartiya Literati and their works such as R.K Narayan's *Malgudi*, Amrita Pritam's *Pinjar*, Arundhati Roy's *God of Small Things*, and Kushwant Singh's *Train to Pakistan*; who have taken over the literary world. It is important to note that the paper is limited only to the genre of prose and fiction and does not study the genre of poetry, drama, and non-fiction writing. Additionally, it's necessary to mention that the paper limits itself strictly to Indian English Literature i.e body of work by writers in India who write in the English language but whose native or co-native language could be one of the numerous languages of India. Writing by Indian diaspora writers has also been included



in this The mention of Amrita Pritam's work *Pinjar* is the only exception considered in order to explain the reach of Indo-Anglican literature.

### **Indo-Anglican Literature**

In the early decades of the 20th century, Indian English Literature began to evolve beyond the colonial perspective, as Indian authors started to write about their own experiences and concerns. Later in the post-independence era, Indian English Literature continued to grow and evolve, with a new generation of writers exploring a wide range of themes and genres. Theme and technique employed by these writers play a major role in the development of the Indian eng as these elements are the ones that reach out to the audience and help deliver the ideas and notions in a dynamic and determined manner resulting in the complete immersion of the reader in the work of art. A strong thematic structure helps to pull the story forcefully resulting in a remarkable piece of literature.

Indian English Literature exudes a variety of themes ranging from rich Indian Culture, and social and traditional values to multifarious issues like the freedom struggle, nationalism, and contemporary modern issues. A technique that you see in Indo-Anglican literature is 'Stylistic influence' i.e the language used in the work emerges from the local languages. This is an exceptional feature of much of Indian English Literature which is what pulls the reader in as it helps to articulate their experiences and perspectives, challenge dominant narratives and expand the boundaries of the field.

### **Bhartiya Literati**

Through elements of themes and writing styles the Bhartiya Literati employ, they make an impactful presentation of their ideals and notions that impact the reader. Indian writers are known worldwide for their exemplary writing and words that catch the eye of the reader. Works of R.K Narayan, Amrita Pritam, Kushwant Singh and Arundhati Roy are studied in this paper to exhibit the exposure that their works have provided to Indo-Anglican literature globally.

### **R.K Narayan**

Regarded as one of the three leading English language Indian fiction writers, along with Raja Rao and Mulk Raj Anand, whose works brought India to the forefront of English literature. A prolific writer, with 30 novels and numerous short stories under his belt, his greatest achievement was making India accessible to the outside world through his literature. Narayan's works have been translated into multiple languages and have gained international recognition for their vivid descriptions, rich characters, and wry humor. Through his unpretentious writing style, he was able to write about the complexities of Indian society without altering the distinctive simplicity of his characters to conform to the trends of fictional writing.

One of his greatest achievements is his work, *Malgudi*, a collection of short stories about a fictional small town where the standard norms of superstition and tradition apply. Through *Malgudi* he represents the entirety of Indian society in a subtle form by portraying India's regional nuances and shifts as well as idiosyncrasies and portrayal of characters struggling with modernity and philosophical issues that help the reader relate. Although portraying poverty and misery, Narayan's empathetic stories were full of humor, subtle irony, and a profound religious sensibility. He also employed the use of nuanced dialogic prose with gentle Tamil overtones based on the nature of his characters to portray a sense of 'Indianness'. Through writing style and peculiar characterization in *Malgudi*, Narayan brought small-town India to the readers' own backyard in a manner that was both believable and experiential

## Khushwant Singh

Khushwant Singh has established himself as one of the most renowned Indian writers of English literature. He's known to create sharp-witted parallels between the social and behavioral traits of Westerners and Indians. In comparison to other Indian authors, his writing is quite particular and distinctive as they hover over grave issues with a hint of wit, comedy, and sarcasm.

He was one of the last survivors of India's independent generation and his novel *Train to Pakistan* proves it with its visual representation of the grueling truth. Instead of merely focusing on the political events that led up to the Partition, Khushwant Singh delves deeply into the local context, adding a personal element that gives the event a sense of truth, horror, and plausibility. Based around a tiny village Mano Majra, it revolves around the lives of Sikhs, Hindus, and Muslims and the displacement caused by the Partition of India. The gore imagery that he employs along with the sarcastic nature of his characters, specially Jagga, brings forth the gruesome reality of the Partition and the repercussions on the masses which no other writer has done. His other significant works include *The Portrait of a lady*, *The Voice of God* and other stories, *The History of Sikhs* and etc.

## Amrita Pritam

Another writer of the Post-Independent era, Pritam has established for herself a niche in the area of partition literature. Her writing exhibits a subtle but noticeable blend of daring and bravery throughout her works. Her fearlessness to explore topics never mentioned before in Indian English literature has helped her gain her spot. Through her widely known novel, *Pinjar* majorly sheds light on the suffering, alienation, and trauma of women, who according to her were the worst victims of the Partition.

Pritam was very well aware of the torture that the women suffered before, during, and after the partition. Her first outcry against this appeared on paper as her legendary blood-boiling poem *Aj Aakhaan Warris Shah Nu...* which she later used as an introduction to her novel *Pinjar*. Abduction, rape, mutilation of genitalia, public humiliation, ripping out the wombs, branding sexual organs with religious symbols or tattooing religious symbols on the private part of the women's body, naked parades on the streets, amputating breasts, burning vaginas –were the sinister violence inflicted on women's body of both sides during the partition of India and Pakistan and Pritam exposes them all in her novel. Through *Pooro*, she embodies every woman who were a victim of such violence. Her fearless and triggering style, the examination of the impact of partition violence and cultural displacement, and clear-cut portrayal of women's suffering in her works are highly regarded worldwide.

## Arundhati Roy

Roy is one of the most acknowledged contemporary Indian authors, known for her humanistic approach, descriptive narrative, and mainly her linguistic experiment. Through her debut novel *The God of Small Things*, she gained widespread recognition as the first non-expatriate Indian author and the first Indian woman to have won the Booker prize.

*The God of Small Things* is semi-autobiographical that describes many of Roy's childhood experiences. Through *The God of Small Things*, she highlights the cross-cultural conflicts of the society which are deeply rooted in tradition. Her experimentation with language is clearly visible in this novel. She not only uses language as a medium to understand her characters but also portrays silence as a language and the power dynamics between language and gender. She also integrates her native language Malayalam into her texts which exemplifies what her native tongue has been doing for thousands of years i.e coexisting with other languages without losing its own influence

(Stockdale). On the other hand, she employs the technique of flashback and stream of consciousness. Her continuous description of thoughts has given readers the impression that they are either participating in the events being described or enjoying the sensation of becoming one with the characters being portrayed. Such style led to her novel blooming internationally and set her as a benchmark for Indian contemporary writers.

## Conclusion

The selected works of these Bhartiya Literati illustrate how Indian English Literature has come a long way since its colonial origins and has established itself as a significant and dynamic field in the global literary landscape. Through its diverse voices, themes, and writing styles, Indian English Literature offers a unique perspective on the complexities and contradictions of Indian society, while also contributing to broader aspects of literature.

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## Growth of Logistics Sector in India

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### ABSTRACT

Logistics is the process of planning and executing the efficient transportation and storage of goods from the point of origin to the point of consumption. The objective of logistics is to satisfy the customer's demands efficiently and effectively. In general, there are three components of logistics - Transportation, Warehousing and Supply Chain Management.

Transportation means planning, optimizing, and executing the use of vehicles to move goods between warehouses, retail locations, and customers. Transportation is multimodal and can include ocean, air, rail, and roads. Warehousing means the storage of goods before they are despatched to their destination and includes such functions as inventory management and order fulfillment. Supply chain solutions are companies that manage end-to-end supply solutions for the distribution of goods. Logistics has gained importance over the past years since on-time delivery of intact packages has always been important throughout the supply chain. India's logistics sector is estimated to account for about 14.4% of GDP. The study of the topic is based on secondary data and the objective is to portray the country's growth in the field of Logistics due to multiple factors such as infrastructure development, implementation of GST, growth of e-commerce, and government initiatives such as 'Make in India' and finally through the implementation of 'National Logistics Policy.' India aims to be among the top 10 in the Logistics Performance Index by 2030. This can be brought about by reducing the Logistics cost from 14-18% of GDP to global best practices of 8 % through the implementation of National Logistics Policy

### Keywords

Logistics, Components of Logistics, Contribution in Indian Economy. The unorganised logistics sector, National Logistics Policy

### Introduction

***"Good logistics reduce trade costs, but supply chains are only as strong as their weakest link. For developing countries, getting logistics right means improving their infrastructure, customs, skills and regulations."*** – Director, Macroeconomics, Trade & Investment, World Bank Group

Logistics is extremely important for the development of a country. It deals with the method of obtaining resources and its delivery to the ultimate location. It is a vital sector that can extremely affect any country's export thereby increasing global competition with the underlying assumption of a robust logistics sector. The logistic industry comprises all supply chain activities viz transportation, storage, inventory management, flow of information and customer service. The strength of logistics lies with the fact a company is able to keep up with demand. The global logistics market in terms of revenue was valued at \$8185.46 bn in 2015 and is expected to increase to \$15522.02 by the end of 2023 with a growth rate of CAGR of 7.5% from 2015 to 2024.

Logistics is a very important support for India's Economic development. The Indian Logistics Market was estimated to be valued at \$410.75 Billion in 2022 and is expected to grow to \$556.97 by 2027.

The Logistics Performance Index(LPI) is an interactive benchmarking tool created by the World Bank which helps countries identify the challenges and opportunities faced in the logistics sector. According to LPI 2018, India ranks have improved from 54 in 2014 to 44 in 2018 jumping 10 places. But India has a high logistics cost as a percentage of GDP at 14 % compared to BRICS average of 11 %.

The current logistics framework in India is deficient, ill-equipped and ill-designed to support the high growth rates of the economy over the next decade. Recognised as the country's sunshine industry, the Indian logistics sector is getting ready to move from its present unorganised, fragmented business model to an organised, regulated structure.



**Objective**

1. To study the nature of Logistics Sector in India
2. To understand the contribution of Logistics in Indian Economy
3. To evaluate the growth of Logistics Industry over the years
4. To understand the National Logistics Policy and its contribution in the Logistics Sector

**Methodology**

The entire study is undertaken using secondary data.

**Understanding the Indian Logistics Sector**

India’s Logistics Market Size has grown from \$178 bn to \$216 bn and is expected to grow to \$365 bn in 2026. Transportation sector accounts constitute the major share in the Indian Logistics sector. In road transport, it includes types such as full truck, half truck and express parcel delivery. In FY 2020 the total logistics share accounted for \$216 bn in which nearly 70 % i.e. \$151 bn is contributed by the transportation industry and the balance 30% is contributed by warehousing and supply chain solutions. In transportation, road transport accounts for nearly 82 % ie \$ 124 Bn followed by rail i.e. \$21bn, air \$0.8bn and cross border \$5.4bn.

The key players in Logistics includes TCI Express Ltd, VRL Logistics Ltd, Gati Limited, DELHIVERY, Apollo LogiSolutions Ltd, Blue Dart Express Ltd, Mahindra Logistics Ltd, Blue Dart, All Cargo, Gateway Distriaparks Ltd.Container Corporation of India in road, rail and cross border logistics

## INDIA LOGISTICS MARKET SIZE

FY 2018	\$178 BN
FY 2019	\$196 BN
FY 2020	\$216 BN
FY 2026	\$ 365 BN

### Challenges Faced By Logistics Market in India

- **Highly Fragmented Market** around 85 % of the transporters own less than 20 trucks and Over 90 % of the warehouses are smaller than 10,000 sq ft area. Warehouses are utilised by sizeable and profitable industries due to which the new SMEs and startups are not able to use the due to high running cost
- **Unorganised Sector**- accounts for over 95 % and organised players accounts for only 3 to 5% .They are expected to grow 3 times faster at a compounded rate of more than 35% in next few years
- **High Cost of Logistics**- around 14% of GDP as compared to global average of 8%



- **Poor Infrastructure & Technology**

India has poor infrastructure which poses a big challenge in the logistics sector. The country faces challenges in port and roadways infrastructure which directly impacts the transportation of goods. There is an acute shortage of National Highways in the country which accounts for only 2.5 % network and inefficiency of checkpoints and toll plaza adds to the problems faced in the logistics sector. India also lacks an efficient port infrastructure and facilities which includes high turnaround time for ships. But there has been an improvement in the average turnaround time for a ship at Indian port in recent years which is now around 26 hours from 44 hours.

The logistics has shifted to a more technological friendly environment over the past few years still faces challenges in regards tracking the goods and safeguarding documentation which poses a challenge to substantiate claims at the time of litigations



- **Inefficiency-** Pilferage, Damage & Wastage- almost 16% of Agricultural output is wasted in one year
- **Complex Structure-** more than 20 government agencies, 40 Partner Government Agencies, 37 export Promotion Councils, 500 certifications
- For the year 2021, The cost of running one km per metric tonne of load is Rs.1.6 for Railways, Rs.2.2 for Inland Waterways and Rs.3.6 which ensures that the most cost effective mode of transport is Railways. Even then Roads contribute to India's 65% of Freight Transport while just 25 % is carried by Railway. This figure is reversed for the case of Developed countries. The main reason behind this is the unavailability and inefficiency of the railway sector. India has no separate freight corridor for good trains and it leads to competition with passenger trains and priority is given to passenger trains for traffic clearance which eventually leads to delay in delivery. Similarly the average speed of goods trains in India is only 25 km per hour which adds to the delay. Similarly the share of Inland waterways in India Freight transport is also very low due to several government rules and regulations
- **Environmental Impact** due to higher fuel consumption, rising fuel imports etc are some of the bottlenecks in this sector

## Opportunities in Logistics Market

- **Infrastructure Development-**

The government has initiated many projects for infrastructure development which includes National Infrastructure Pipeline and also has started many projects for connectivity of the main cities and also initiatives such as 'Make in India' and the production-linked incentives (PLI) scheme have augmented the growth of the infrastructure sector. Also majority part of government spending is directed towards transportation, electricity, water and irrigation

- **Industrial Development**

India has a vision of a \$5 Trillion Economy and this will predominantly depend upon the growth of the industrial sector. The industrial sector of the country includes electronics, transport and telecommunications. Adding to it there are 8 industrial sectors that are considered the essence of development in India.

The important sector makes up 40% of the Index of Industrial Production (IIP) and it can be evident from the fact the core sector report 8% growth in June 2022 from the Covid Level, with a substantial growth from all sectors other than steel and crude oil.

The core sector makes up 40% of the Index of Industrial Production (IIP), making it a lead indicator of industrial activity. The core sector reported 8% growth in June 2022 from the Covid level, with a healthy performance from all the sectors, except steel and crude oil.

- **Implementation of GST**

GST has had a positive impact on the logistics sector of the country, the truth being revealed from the fact that paperwork has been minimised. Due to a unified tax structure, there is a significant decrease in the documentation part. This has also eased the movement of logistics carriers through which the deliveries have speeded up.

- **Growth of E-commerce-**

Due to the enormous growth of the Tier I and Tier II companies, E Commerce has seen a steady growth. Due to Covid-19 Pandemic, there has been a shift in buying patterns of consumers which has pushed them to resort to digital purchasing. As per India's E-commerce Report 2021, the size of Indian Logistics Market grew by 4% and it is expected to grow at a CAGR of 5% from 2022-27, thereby contributing market revenue of \$ 633.6 billion by 2027. With the emergence of new market-increasing penetration, increasing demand from tier 2 and tier 3 cities and value added services like cash on delivery, return logistics, easy replacement are all posing an positive environment for the growth of logistic sector in India

- 'National Logistics Policy.- National Logistics Law, National Multimodal Facilities and Warehousing

## National Logistics Policy 2022

- Government has launched a National Logistics Policy (NLP) on 17th September,2022 aiming to achieve 'quick last-mile delivery', and end transport-related challenges.
- Logistics costs have to be cut by half to be near global benchmarks by 2030 by reducing the cost of logistics from 14-18% of GDP to global best practices of 8%.
- Being the 5th largest economy in the world, India aims to be among the top 10 in the LPI (Logistics Performance Index) by 2030.
- The main focus is on key areas such as process re-engineering, digitisation and multi-modal transport
- The need for a national logistics policy was felt since the logistics cost in India is high as compared to other developed economies.

## Key Features

- **Digital Integration System(IDS):** It will lead to seamless and faster work-flow, making logistics significantly more efficient. Systems from seven distinct departments will be digitally integrated (like road transport, railways, aviation, commerce ministries and foreign trade). The IDS integrates 30 distinct systems from these seven agencies.
- **Unified Logistics Interface Platform(ULIP):** It aims to collapse all logistics and transport sector digital services into a single portal, thereby freeing manufacturers and exporters from the present tyranny of long and cumbersome processes. This guarantees quicker and more seamless cargo transportation and makes it possible for confidential real-time information exchange. This Logistics Data Bank Project of the National Industrial Corridor Development Corporation (NICDC) has been leveraged.
- **Ease of Logistics Services(ELOG):** E-Logs, a new digital platform, will allow industry to directly take up operational issues with government agencies for speedy resolution.
- **Group for System Improvement:** It will routinely keep an eye on all logistics-related initiatives.
- **Comprehensive Logistics Action Plan:** The Comprehensive Logistics Action Plan comprising integrated digital logistics systems, standardisation of physical assets, benchmarking service standards, human resource development, capacity building, development of logistics parks, etc.

### Significance of the Policy

- ❖ PM Gati Shakti will get further boost and complementarity with the launch of the National Logistics Policy.
- ❖ The Policy will help make the sector an integrated, cost-efficient, resilient, and sustainable logistics ecosystem in the country as it covers all bases of the sector along with streamlining rules and addressing supply-side constraints.
- ❖ The policy is an endeavour to improve the competitiveness of Indian goods, enhance economic growth and increase employment opportunities.

## Conclusion

NLP aims to remove all obstacles and inconsistencies in the logistics sector by re-engineering current processes. The government's vision is to develop a technologically enabled, cost-efficient, sustainable, and trusted logistics ecosystem for accelerated growth. The fall in logistics costs would improve the competitiveness of Indian goods in domestic and export markets.



Logistics Sector is considered to be the backbone of Indian Economy and Effective Implementation of National Logistics Policy is essential to achieve the \$5 trillion economy by 2025

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- <https://www.globenewswire.com/en/news-release/2022/10/28/2543606/0/en/The-Indian-E-Commerce-Logistics-Industry-is-expected-to-grow-by-more-than-20-CAGR-in-the-next-five-years-Makreo-Research.html#:~:text=The%20Indian%20E%2DCommerce%20Logistics%20Industry%20is%20expected%20to%20grow,next%20five%20years%3A%20Makreo%20Research>
- <https://www.geeksforgeeks.org/national-logistics-policy-2022>



## To study the perception, preference and satisfaction towards E-learning

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### ABSTRACT

The deadly Coronavirus broke across the World. The COVID-19 pandemic has been a period of upheaval for Undergraduate students. The COVID-19 has presented many challenges to Undergraduate Children and conditions have been especially vulnerable to the changes. During & after the pandemic all of us shifted to E-learning. E-learning has changed the college experience for many students. Rather than sitting through college courses and taking notes, tech-savvy Net generation students are taking advantage of online classes and other forms of online learning. For ex-BYJU's E-learning classes, Flinto classes, swayam courses etc.

Materials and Methods: A questionnaire was prepared and distributed among various undergraduate students, and the results were assessed. A simple random sampling technique has been used whereas a sample size of 50 odd respondents has been collected. The paper uses primary as well as secondary data and the findings are briefed the same through simple statistical tools & techniques.

### KEYWORDS

E-learning, students.

### Introduction

A learning system based on formalised teaching but with the help of electronic resources is known as E-learning. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. E-learning can also be termed as a network enabled transfer of skills and knowledge, and the delivery of education is made to a large number of recipients at the same or different times. Earlier, it was not accepted wholeheartedly as it was assumed that this system lacked the human element required in learning. The introduction of computers was the basis of this revolution and with the passage of time, as we get hooked to smartphones, tablets, etc, these devices now have an important place in the classrooms for learning. Books are gradually getting replaced by electronic educational materials like optical discs or pen drives. Knowledge can also be shared via the Internet, which is accessible 24/7, anywhere, anytime.

### Objective

1. The objective of this study was to examine the positive & negative effects of E-learning on undergraduate students.
2. To check whether e-learning helps to improve the efficiency and effectiveness of undergraduate students.
3. To check whether it helps to improve user-accessibility and time flexibility to engage learners in the learning process.

### Research Methodology

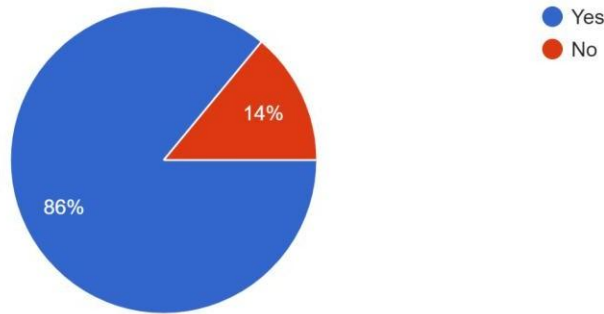
Focusing on the topic of research study, a primary research was conducted.

We have prepared a questionnaire on Google forms. Primary data was thus collected from a sample of 50 respondents of age groups 18 to 22 who closely resemble the population using close ended



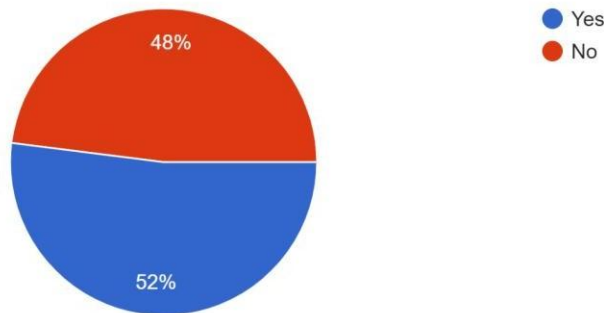
4. Do you prefer textbooks as a learning material?

50 responses



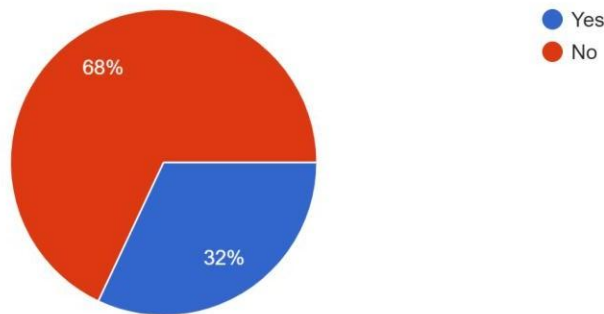
5. Is accessing copies of offline academic transcript is hard?

50 responses



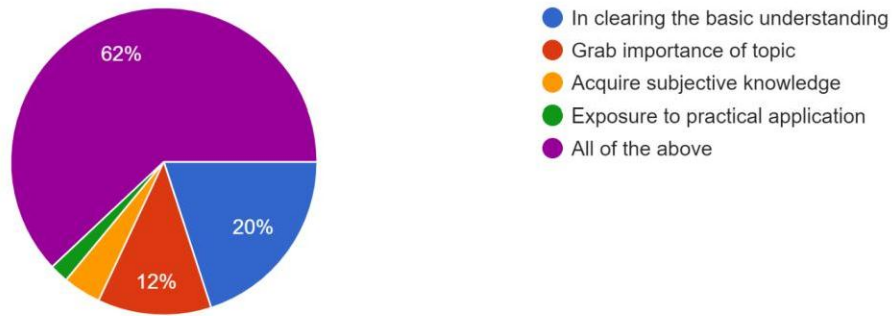
6. Do you have difficulty in finding relevant online material?

50 responses



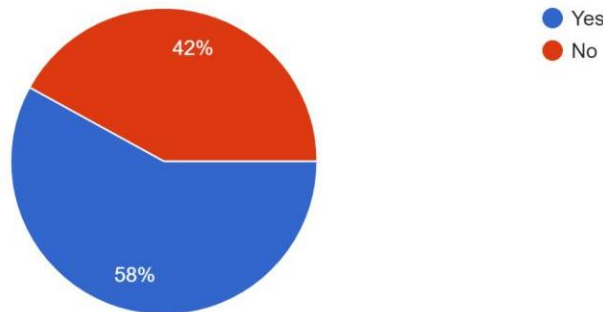
7. How much e-learning helps?

50 responses



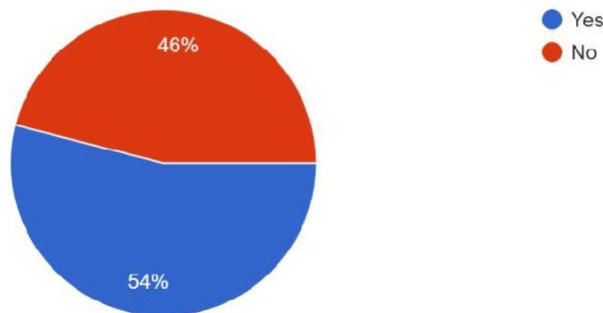
8. E-learning is time consuming?

50 responses



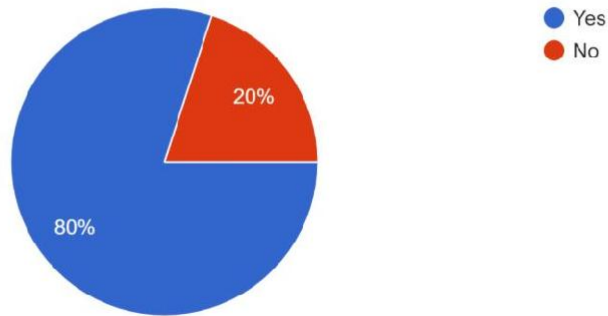
9. Do you prefer online study?

50 responses



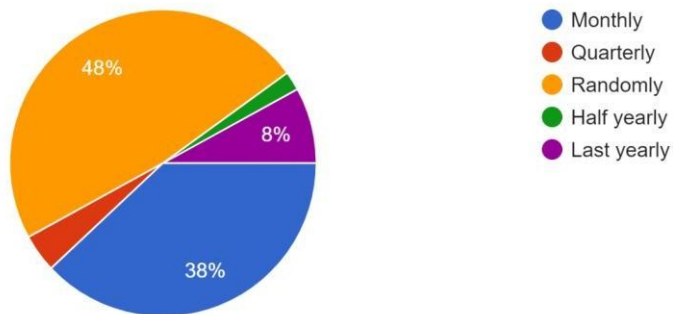
10. Do you prefer presentation in classroom study?

50 responses



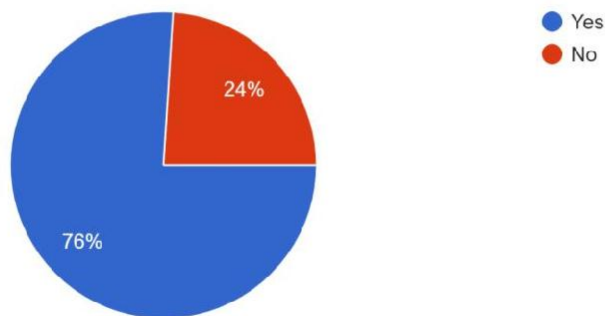
11. How often you use e-study or online study material?

50 responses



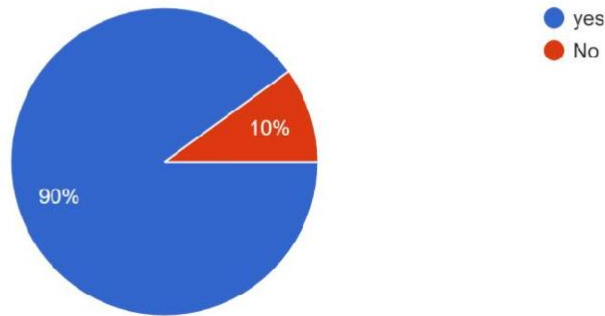
12. Am i able to manage my time effectively?

50 responses



13. The e-learning environment enable us to access information & learn when we want.

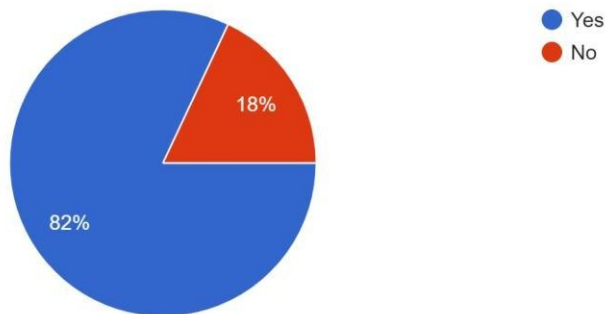
50 responses



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14. Compared to traditional learning, e-learning makes you productive at study.

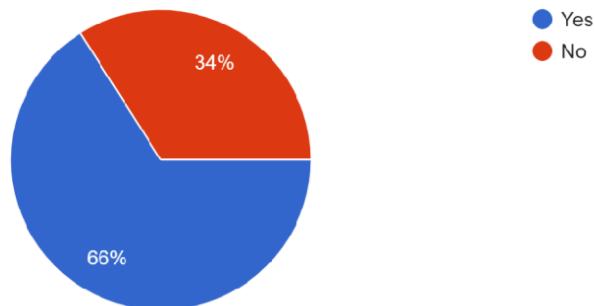
50 responses



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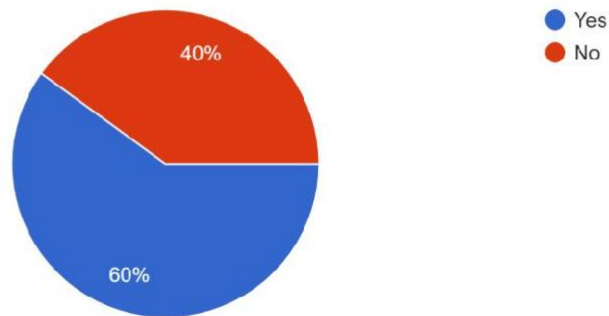
15. The e-learning environment can enhance exchange and communication between the teachers & students.

50 responses



16. E-learning imparts to psychological stress?

50 responses



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## Result Analysis

A primary research was conducted from 50 respondents (both the genders) by sampling method who represented the population. The respondents were in the age group of 19 to 23 years.

56% of the respondents prefer online classes.

86% of the respondents prefer textbook as a learning material.

52% of the respondents feel that accessing copies of offline academic transcript is hard.

68% of the respondents don't find any difficulty in finding relevant online material.

62% of the respondents feel that e-learning helps a lot, ex. in clearing the basic understanding, to grab the importance of topic, acquire subjective knowledge, exposure to practical application.

58% respondents said e-learning is time consuming.

54% respondents prefer online study.

80% of the respondents prefer presentations in classroom study. They get more clarity while studying online.

Majority of students often use e-study or online study material

76% of respondents feel they are able to manage their time effectively due to e-learning.

90% of respondents feel that the e-learning environment enables them to access information & learn when they want.

82% of the respondents prefer e-learning compared to traditional learning.



66% of the respondents feel that an e-learning environment can enhance exchange and communication between the teachers & students.

## Conclusions

Majority of the students are preferring E-learning. They are satisfied with online material.

## Suggestions

1. According to data analysis we have suggested students instead of using offline course material you can go for freely available online textbook. Use subject related reference books and tutorials website for more practical knowledge.
2. According to data analysis we found that Mental well-being is a crucial topic. Yoga, regular exercises and other fitness training can be provided to the students. We can provide training for students on how to access online materials.

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## Characteristics of Physical Status and Development of Students at the National University of LAOS

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### ABSTRACT

Applying the physical standard assessments of the Vietnamese from age 6 to 60 and university student fitness rating enacted by the Ministry of Education and Training (MOE) of Vietnam on first to fourth-year students (4000 men; 4000 women) of the National University of Laos. The result revealed that the status of physical development of Laos's students are in the same result in terms of age and gender of Vietnamese but it did not meet the MOE of Vietnam's standard requirements for Vietnamese students with a substantial proportion of fitness rating assessments (77% to 99,2%).

### KEYWORDS

Physical fitness, Students, National University of Laos

### Introduction

Established under Decree No. 50/TTCP by the Prime Minister on 09/06/1996 and implemented first class on 05/11/1996, the National University of Laos (NUOL) is the largest university in Laos, located in the Vientiane capital. The NUOL emerged as the primary human resource training facility with a scale of 13 member universities and training more than 96 majors and 171 different training programs. Each officer and student of the NUOL is responsible and obligated to participate. Regular physical training improves their physical fitness and supports their integration into the realities of work, accomplishing all given responsibilities.

Besides, the NUOL is one of the training centers for a large number of human resources with the task of building and developing the country. Therefore, regular physical training is the responsibility and obligation of each staff member and student of National University of Laos for the purpose of physical training and physical development for each student, helping them to quickly integrate. with actual work and complete all assigned tasks.

Motor skill development, or children's capacity to use and regulate their bodies, is referred to as physical development (Virtual Lab School, n.d.). These improvements in gross- and fine-motor abilities are critical to children's general health and well-being.

Physical education is widely cited as having considerable public health benefits. Article 1 of the UNESCO Charter for Physical Education and Sport (1978) states that the importance of physical education and its position as a fundamental right is safeguarded within educational institutions through the availability of possibilities. Overwhelming medical and other scientific evidence provided a prima facie case in the latter part of the twentieth century for the inclusion of physical education. As an essential school curriculum subject, laying the groundwork for the 'physically educated' person and lifelong engagement in regular physical activity (Marshall & Hardman, 2000). On the other hand, a model of motor development proposes a dynamic and synergistic function for actual motor competence (MC), perceived MC, or physical fitness as contributors to an excellent or lousy spiral influencing children's health. These characteristics can favorably influence physical activity participation and weight status throughout infancy, youth, and maturity (Estevan et al., 2019).

Berkson and colleagues (2013) mentioned that these trends threaten to reduce current and future generations' health and life expectancy. As an obesity and prevention approach, the Institute of

Medicine and the American Academy of Pediatrics advocate routinely measuring body mass index (BMI) in all children and adolescents. The BMI monitoring in public schools aims to measure childhood obesity in a population. In contrast, BMI screening seeks to identify individuals at risk for weight-related health problems and offer families individualized health information about their children. As eloquently stated, physical literacy is a freshly reintroduced term that articulates vital skill and confidence (Gu et al., 2019). It may be rooted in a person's voluntary engagement in physical exercise. Examining various physical literacy aspects using a single sample offers the ability to shed insight into students' accomplishments in different physical literacy dimensions and highlight areas of strength and weakness to guide future educational methods.

As a result, thorough evaluations of physical state and physical development features are necessary as a scientific foundation for selecting and applying solutions to enhance the quality of physical education for students.

## Research Methodology

The study's goal is to apply the findings to the previously mentioned problem while justifying and satisfying the study's objectives. The dependent variables represent the process of acquiring intervention abilities through a skills exam assessing the student's physical status and development. The following methodologies were used during the procedure and will be determined and answered in this study:

- 1.1 Methods of reading and analyzing documents
- 1.2 Pedagogical observation methods
- 1.3 Interview methods
- 1.4 Methods of pedagogical examination
- 1.5 Sports Biomedical Methods
- 1.6 Statistic mathematical methods

Physical status characteristics include:

- Being physically healthy.
- Being able to sleep and eat well.
- Being physically active.
- Maintaining excellent cleanliness.
- Getting adequate rest.

In context, evaluations of physical state and physical development features have yet to be developed and published by the Laos government. The assessments used the standard physical ranking of the Vietnamese from age 6 to 60, promulgated by the Vietnamese General Department of Sports in 2013. And in fitness ratings of university students enacted by the MOE of Vietnam under Decision No. 53/2008/QD dated 18/9/2008.

The test on NUOL students included:

- Physical form (3 indicators): Height; Weight; BMI
- Function (01 indicators): Heart function (HW)
- Physical strength (07 tests): Body Flexibility (cm); Dominant hand squeeze force (kG); Crunches (30s per each); Long-jump (cm); 30 meters run (s); Run forward & back 4x10m (s); 5mins endurance run.

The BMI evaluation using the Diabetes Association of Asian Countries (IDI & WPRO) categorization scale applies to Asians. The target participants were 8000 NUOL students in courses for the school year 2018-2022, 2017-2021, 2016-2020, 2015-2019, 1000 men and 1000 women per course with ages ranging from 19 to 22 assessments dated last October 2018.

It is a growing public health issue with a bad prognosis. Anxiety increases when chronic heart disease progresses via the New York Heart Association categorization system. These psychological disorders in persons with chronic heart failure may impact their quality of life. However, the link

between anxiety and depression, quality of life, and physical function remains unknown (Chien et al., 2011). Regular physical exercise is a vital diabetes control technique that provides several advantages. Individuals with type 1 and 2 diabetes will benefit from more excellent cardiorespiratory fitness, lower insulin resistance, and better lipids. Moderate- to vigorous-intensity activities should be spaced out throughout the week as long as the individual does not skip more than two consecutive days of physical activity (Siomos et al., 2017).

## Results & Discussions

### 1. Real situation of physical development level of students at National University of Laos

This study's findings suggest that the test has shown the reality of NUOL students' physical states from the average values in tables 1 and 2.

**Table 1: NUOL men's physical stats compare to Vietnamese of the same age and gender**

Stat	1st Year	VN Age 19	t	p	2nd Year	VN Age 20	t	p	3rd Year	VN Ages 21-22	t	p	4th Year	VN Ages 21-22	t	p
	$\bar{X} \pm \delta$	$\bar{X} \pm \delta$			$\bar{X} \pm \delta$	$\bar{X} \pm \delta$			$\bar{X} \pm \delta$	$\bar{X} \pm \delta$			$\bar{X} \pm \delta$	$\bar{X} \pm \delta$		
Height (m)	165,07 ± 3,75	164,87 ± 5,41	1,90	>0,05	165,24 ± 4,66	165,14 ± 5,61	0,70	>0,05	165 ± 5,61	163,66 ± 5,45	16,66	<0,05	165,45 ± 4,88	163,66 ± 5,45	13,91	<0,05
Weight (kg)	52,15 ± 4,08	53,16 ± 5,71	0,09	>0,05	52,35 ± 4,98	53,16 ± 5,71	1,28	>0,05	52,95 ± 5,22	54,40 ± 5,93	3,58	<0,05	53,45 ± 4,96	54,40 ± 5,93	0,42	>0,05
BMI (kg/m <sup>2</sup> )	13,05 ± 0,93	13,20 ± 3,71	1,67	>0,05	13,15 ± 1,08	12,95 ± 3,62	2,37	<0,05	10,85 ± 2,11	10,69 ± 2,97	2,29	<0,05	10,85 ± 2,11	10,69 ± 2,97	2,03	<0,05
Heart function (HW)	12,85 ± 1,42	13,00 ± 6,01	1,62	>0,05	13,85 ± 1,20	14,00 ± 5,95	1,63	>0,05	12,15 ± 1,12	10,00 ± 6,78	26,51	<0,05	11,05 ± 1,12	10,00 ± 6,78	13,01	<0,05
Body flex (cm)	43,5 ± 3,62	44,44 ± 6,12	0,66	>0,05	43,95 ± 3,94	44,57 ± 6,42	1,09	>0,05	43,65 ± 3,46	42,50 ± 7,35	6,35	<0,05	43,05 ± 3,46	42,50 ± 7,35	5,15	<0,05
Dom hand squeeze (kg)	19,5 ± 1,78	20,00 ± 3,59	1,56	>0,05	20,00 ± 1,72	20,00 ± 4,00	1,41	>0,05	16,5 ± 1,58	15,00 ± 4,00	21,88	<0,05	16,00 ± 1,58	15,00 ± 4,00	14,67	<0,05
Crunches (30s per each)	220,15 ± 17,38	218,00 ± 20,70	1,63	>0,05	222,05 ± 17,11	220,00 ± 20,80	4,61	<0,05	205,55 ± 17,01	206,00 ± 25,70	3,76	<0,05	205,95 ± 17,01	206,00 ± 25,70	6,94	<0,05
Long-jump (m)	4,90 ± 0,36	4,85 ± 0,49	1,55	>0,05	4,74 ± 0,34	4,85 ± 0,53	3,42	<0,05	5,31 ± 0,42	5,28 ± 1,01	0,77	>0,05	5,42 ± 0,42	5,28 ± 1,01	3,60	<0,05
30meters run (s)	10,65 ± 0,69	10,59 ± 0,94	1,34	>0,05	10,76 ± 0,91	10,61 ± 0,97	3,02	<0,05	11,76 ± 1,04	11,74 ± 1,30	0,37	>0,05	11,81 ± 1,04	11,74 ± 1,30	1,29	>0,05
Run forward & back 4x10m (s)	950,80 ± 76,91	954,00 ± 122,0	39,41	<0,05	945,25 ± 85,16	942,00 ± 118,0	3,57	<0,05	865,15 ± 77,33	852,00 ± 134,0	5,73	<0,05	845,85 ± 77,33	852,00 ± 134,0	18,63	<0,05
5mins run (m)	165,07 ± 3,75	164,87 ± 5,41	1,90	>0,05	165,24 ± 4,66	165,14 ± 5,61	0,70	>0,05	165 ± 5,61	163,66 ± 5,45	16,66	<0,05	165,45 ± 4,88	163,66 ± 5,45	13,91	<0,05

**Table 2. NUOL women’s physical stats compare to Vietnamese of the same age and gender**

Stat	1st Year	VN Age 19	t	p	2nd Year	VN Age 20	t	p	3rd Year	VN Ages 21-22	t	p	4th Year	VN Ages 21-22	t	p
	$\bar{X} \pm \delta$	$\bar{X} \pm \delta$			$\bar{X} \pm \delta$	$\bar{X} \pm \delta$			$\bar{X} \pm \delta$	$\bar{X} \pm \delta$			$\bar{X} \pm \delta$	$\bar{X} \pm \delta$		
Height (m)	153,5 ± 4,72	153,66 ± 4,98	1,14	>0,05	154,00 ± 5,47	153,88 ± 5,28	1,90	>0,05	154,5 ± 5,56	153,85 ± 5,19	4,16	<0,05	154,5 ± 5,53	153,85 ± 5,19	4,49	<0,05
Weight (kg)	45,5 ± 3,74	45,77 ± 5,03	2,28	<0,05	46,5 ± 4,11	45,77 ± 5,33	4,01	<0,05	47,5 ± 4,21	47,20 ± 5,32	1,11	>0,05	47,5 ± 3,43	47,20 ± 5,32	5,28	<0,05
BMI (kg/m2)	19,5 ± 1,82	19,48 ± 1,85	1,14	>0,05	19,00 ± 1,58	19,43 ± 1,97	0,15	>0,05	20,5 ± 2,01	19,90 ± 1,87	3,01	<0,05	20,0 ± 1,76	19,90 ± 1,87	1,09	>0,05
Heart function (HW)	13,85 ± 0,92	14,04 ± 3,30	2,01	<0,05	13,75 ± 1,06	14,13 ± 3,30	2,09	<0,05	11,45 ± 1,08	11,22 ± 2,69	3,61	<0,05	11,15 ± 0,74	11,22 ± 2,69	0,31	>0,05
Body flex (cm)	12,95 ± 1,07	13,00 ± 6,00	1,00	>0,05	12,85 ± 2,18	12,00 ± 5,78	9,55	<0,05	10,65 ± 0,92	9,00 ± 6,60	18,34	<0,05	9,95 ± 0,85	9,00 ± 6,60	10,74	<0,05
Dom hand squeeze (kg)	28,95 ± 2,06	29,15 ± 4,91	1,83	>0,05	28,95 ± 2,29	28,83 ± 4,74	1,79	>0,05	28,75 ± 2,35	28,50 ± 5,59	2,58	<0,05	28,35 ± 2,15	28,50 ± 5,59	1,72	>0,05
Crunches (30s per each)	15,25 ± 1,29	12,00 ± 3,99	42,2	<0,05	15,05 ± 1,07	12,00 ± 3,88	43,95	<0,05	14,75 ± 0,86	8,00 ± 4,34	83,27	<0,05	14,00 ± 0,67	8,00 ± 4,34	80,17	<0,05
Long-jump (m)	159,55 ± 15,14	159,00 ± 17,10	1,50	>0,05	158,45 ± 14,22	157,00 ± 17,10	2,83	<0,05	154,95 ± 13,78	154,00 ± 23,10	0,04	>0,05	154,05 ± 13,42	154,00 ± 23,10	3,55	<0,05
30meters run (s)	6,25 ± 0,58	6,19 ± 0,61	0,75	>0,05	6,15 ± 0,47	6,22 ± 0,62	1,34	>0,05	6,50 ± 0,59	6,85 ± 1,29	6,88	<0,05	6,85 ± 0,53	6,85 ± 1,29	0,62	>0,05
Run 4x10 (s)	12,75 ± 0,97	12,62 ± 1,09	1,92	>0,05	12,75 ± 0,96	12,62 ± 1,09	2,31	<0,05	13,85 ± 1,35	13,85 ± 1,63	0,15	>0,05	13,95 ± 1,04	13,85 ± 1,63	1,98	>0,05
5mins run (m)	745,55 ± 61,03	729,00 ± 101,0	26,25	>0,05	730,35 ± 64,46	721,00 ± 96,70	41,26	<0,05	695,85 ± 66,76	697,00 ± 104,0	4,95	<0,05	690,65 ± 45,3	697,00 ± 104,0	15,99	<0,05
<b>TT</b>	<b>Test</b>	<b>1<sup>st</sup> Year (n=1000)</b>			<b>2<sup>nd</sup> Year (n=1000)</b>			<b>3<sup>rd</sup> Year (n=1000)</b>			<b>4<sup>th</sup> Year (n=1000)</b>					

That NUOL students' physical metrics are equal to Vietnamese of the same age and gender. On the other hand, NUOL men tend to have lower flexibility and endurance than the Vietnamese. The Vietnamese results were, noticeably, taken during 2001-2003. That led to the conclusion that students of the NUOL train themselves via sports activities—little since it took them 15 years to catch up with Vietnamese physical status.

**2. Physical characteristics development of the NUOL students:**

The findings of this study analyze students' physical fitness ratings based on the fitness categorization standards of Vietnamese students. The results are shown in Tables 3 and 4.

**Table 3. NUOL men’s physical assessments based on MOE of Viet Nam’s standards**

TT	Test	1 <sup>st</sup> Year (n=1000)			2 <sup>nd</sup> Year (n=1000)			3 <sup>rd</sup> Year (n=1000)			4 <sup>th</sup> Year (n=1000)		
		Average (x)	Students passed	Raio %	Average (x)	Students passed	Raio %	Average (x)	Students passed	Raio %	Average (x)	Students passed	Raio %
1	Dom hand squeeze (kG)	43,50	758	75,8	43,95	762	76,2	43,65	602	60,2	43,05	622	62,2
2	Crunches (30s per each)	19,5	990	99	20,20	990	99	16,5	182	18,2	16,00	196	19,6
3	Long-jump (m)	220,15	746	74,6	222,05	746	74,6	205,55	456	45,6	205,95	454	45,4
4	30 meters run (s)	4,90	968	96,8	4,74	982	98,2	5,3	790	79	5,42	702	70,2
5	Run 4*10m (s)	10,65	968	96,8	10,76	968	96,8	11,76	836	83,6	11,81	804	80,4
6	5 mins run (m)	950,80	408	40,8	945,25	394	39,4	865,15	74	7,4	845,85	58	5,8
Rank	Good	94	9,4	Good	96	9,6	Good	8	0,8	Good	6	0,6	
	Pass	136	13,6	Pass	130	13	Pass	44	4,4	Pass	30	3	
	Fail	770	77	Fail	774	77,4	Fail	948	94,8	Fail	964	96,4	
$\chi^2$	291,6			300,2			802,8			861,2			
p	<0,001												

**Table 4. NUOL women’s physical assessments based on MOE of Viet Nam’s standards**

TT	Test	1 <sup>st</sup> Year (n=1000)			2 <sup>nd</sup> Year (n=1000)			3 <sup>rd</sup> Year (n=1000)			4 <sup>th</sup> Year (n=1000)		
		Average (x)	Students passed	Raio %	Average (x)	Students passed	Raio %	Average (x)	Students passed	Raio %	Average (x)	Students passed	Raio %
1	Dom hand squeeze (kG)	28,95	824	82,4	28,95	826	82,6	28,75	872	87,2	28,35	778	77,8
2	Crunches (30s per each)	15,25	102	10,2	15,05	104	10,4	14,75	20	2	14,00	10	1,0
3	Long-jump (m)	159,55	584	58,4	158,45	530	53	154,95	416	41,6	154,05	396	39,6
4	30 meters run (s)	6,25	760	76	6,15	788	78,8	6,50	606	60,6	60,6	372	37,2
5	Run 4*10m (s)	12,75	648	64,8	12,75	642	64,2	13,85	100	100	10	58	5,8
6	5 mins run (m)	745,55	1	0,1	730,35	2	0,2	695,85	0	0	690,65	0	0
Rank	Good	0	0	Good	0	0	Good	0	0	Good	0	0	
	Pass	8	0,8	Pass	8	0,8	Pass	0	0	Pass	0	0	
	Fail	992	99,2	Fail	992	99,2	Fail	1000	100	Fail	1000	100	
$\chi^2$	968,2			968,2			1000			1000			
p	<0,001												

## Result Showed

### For men:

- First-Year: 30 Meters Run and Run 4x10m has the highest Pass rate proportion (96,8%) and the lowest Pass proportion (40.8%) belongs to the 5 Mins Run test. First-year fitness rankings: Good 9,4%, Pass 13,6% and Fail 77%.
- Second-Year: Crunches has the highest Pass rate proportion (99%) and the lowest pass proportion (39,4%) belongs to the 5 Mins Run test. Second-Year fitness rankings: Good 9,6%, Pass 13% and Fail 77,4%.
- Third-Year: Run 4x10m has the highest proportion (83.6%) of students who passed and the lowest pass proportion (7,4%) belongs to the 5 Mins Run test. Third-Year fitness rankings: Good 0,8%, Pass 4,4% and Fail 94,8%.
- Fourth-Year: Run 4x10m has the highest proportion (80.4%) of students who passed and the lowest pass proportion (5,8%) belongs to the 5 Mins Run test. Fourth-Year fitness rankings: Good 0,6%; Pass 3% and Fail 96,4%.

### For women:

- First-Year: Dom Hand Squeeze has the highest proportion (82,4%) of students who passed and the lowest pass proportion (1%) belongs to the 5 Mins Run test. First-year fitness rankings: Good (0%); Pass 0,8% và Fail 99,2%.
- Second-Year: Dom Hand Squeeze has the highest proportion (82.6%) of students who passed and the lowest pass proportion (0.8%) belongs to the 5 Mins Run test. Second-year fitness rankings: Good (0%); Pass 0,8% và Fail 99,2%.
- Third & Fourth-Year: Dom Hand Squeeze has the highest Pass rating proportion of 87,2% for Third-Year and 77,8% for Fourth-Year; 0% of Pass rating on 5 Mins Run for both courses.

The First- and Second-year students have better physical strength than the Third and Fourth-year students. The fitness level of the Third and Fourth-year female students is not up to the regulations. Many students passed in the 30-meters run and run 4x10m for men and the Dom hand squeeze for women. For the 5-minute running test, both men and women have an insufficient number of passing students. This demonstrates that under the credit-based training program with optional sports, students improve speed and strength while limiting the development of endurance traits.

## Conclusion

The physical strength of the NUOL students is equivalent to Vietnamese of the same age and gender. Pass ratings on the physical fitness of male and female students at NUOL are poor compared to the rating regulations of the MOE of Vietnam. The First and Second-years have better physical fitness than the Third and Fourth-years students. The physical strength of the female students in the Third and Fourth-years did not meet the regulations. However, according to each physical quality (except endurance), the physical attributes of speed, strength, and cooperative ability are ranked at a higher rate.

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## **Study of the effects of e-learning on Student Psychology, Affordability, and Technological Improvements**

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### **ABSTRACT**

E-learning has grown in popularity in recent years especially during the COVID-19 pandemic and entails using electronic technologies to deliver educational content. E-learning benefits students, but how well it works might vary depending on factors like instructional design, learner characteristics, and the learning environment. E-learning has shown to improve learner motivation, contentment, and engagement as well as offer more convenience and flexibility in the learning process to students regardless of their geographical location, allowing them to learn at their own pace and time. Though the outcomes of the recent studies looking into how e-learning affects learners have been generally encouraging, the three facets namely technological advancement, cost-effectiveness, and psychological impact need to be examined. This research paper presents results of a survey conducted across age groups, economic and academic backgrounds and explores its relevance to the three facets stated above.

### **KEYWORDS**

E-learning, psychological impact, technological advancement.

### **Introduction**

E-learning method includes all electronic forms of teaching and learning, where the most recent techniques are used in the fields of teaching and publishing by utilizing computers, storage media, and networks. It is one of the means that supports the educational process and its transformation from the stage of indoctrination to the stage of creativity, interaction, and skill development. The concept of individual or self-education, wherein the learner continues his or her learning according to his or her energy, ability, and speed of learning according to his or her prior experiences and skills, has been further established because of the rapid technological advancements that have given rise to new patterns of learning and education. To impart information and skills, e-learning mostly uses computers and networks. Online education, computer education, virtual classrooms, and online collaboration are only a few of its uses. The government proclaimed a total lockdown at the end of March. Most government and non-governmental educational institutes started online classes suddenly owing to maintain continuity in study in lock down and age of social distancing. The secure and efficient delivery of education to pupils through e-learning has shown to be the answer.

## Rationale

As per the studies of Akram J et. al., an estimated 5-7 million students enrol in at least one online course each year. E-learning, also known as online learning, has attracted a lot of interest in recent years across the globe [1]. The new age has pushed and enhanced the use of e-learning as a means of knowledge acquisition among college professors, business and industry officials, and entrepreneurs in addition to school and college students. Although there are numerous benefits to e-learning, such as convenience, adaptability, and accessibility, there may also be some negative psychological effects. Moreover, it is important to consider the overall affordability and the price of enrolling in online courses. It is essential to research the influences of e-learning on students and the part it plays in their lifestyle.

## Literature Review

Traditional educational approaches have undergone a significant transformation. e-learning, or online learning, was the most practical choice in a few situations where conventional learning was impractical. Many researchers believe that technology is a tool that used to remove geographical barriers and to facilitate learning anytime and anywhere without presence of lectures which may foster deeper learning [2].

Until the pre COVID-19 period, online learning was thus considered more of a supplementary learning aid. The COVID-19 pandemic shifted the entire paradigm to online learning or e-learning becoming the norm for mainstream teaching and learning. This mode suddenly had to be used for regular teaching-learning and for all types of subjects and topics. This study brought out whether students find online learning effective and if they consider themselves well adapted to this mode of learning. The results of the survey conducted by Prachi M et. al. showed that most of the students felt that e-learning is moderately effective. Majority of the students are quite capable of learning practical through online mode [3].

Moreover, the study conducted by Dr. Nahid E et. al. indicates that e-learning significantly improves academic performance and learning process and that students who participate in online/ e-learning achieve better grades than those who studied traditional approach [2].

One can regard that the obstacles in participating in e-learning could be technical problems as well as emotional problems. The research has shown that e-learning systems can make the users frustrated, confused, and reduce their interest in learning over difficulties in using technology [4].

It is crucial from a financial standpoint that e-learning is worthwhile. We should ask ourselves whether e-learning is cost effective. The ability to combine cost savings and better effectiveness of the learning process in the eyes of both the students, the institutions and the society in general will produce a cost-effective e-learning.

## Research Methodology

For the purposes of this study, learners of all ages and occupations are interchangeably referred to as students. This paper aims to meet the following objectives:

1. To study the impact of e-learning on student's physical and mental health.
2. To study the cost effectiveness and cost efficiency of e-learning
3. To research how e-learning is affected by technological advancements.
4. To determine the degree of student satisfaction with online engagement and learning.
5. To assess how stressed-out pupils are during the online learning mode to learn how they are feeling.
6. To learn how successfully students have acclimated to the online method of learning and how effective and valuable they perceive this mode of learning to be.

The paper performs a thorough examination of the literature to find pertinent research and theories about e-learning, student psychology, accessibility, and technical advancements. The theoretical foundation for the study has come from the literature review, which has guided the research strategy.

The research paper focuses on study questions that address the impact of e-learning on student psychology, cost, and advancements in technology. For instance, “As compared to traditional classroom learning, does e-learning improve students' psychological health, lower education costs, and improve their technological skills?”

The sampling method is determined to be random sampling and sample size of 60 students. The sample is representative of the target population and includes students from various socioeconomic and professional backgrounds including academicians, college students, business/industry representatives, entrepreneurs, service, and retired officials from age group between 16 years to 50 years and above from Mumbai. The survey comprised of 20 close ended questions, and the respondents had to choose from a pre-populated answer choice.

Data on students' psychological well-being, accessibility to education, and technical proficiency has been gathered using a combination of quantitative and qualitative data gathering techniques, such as surveys.

## Result and Analysis

### • Technological Impact

What type of device do you use for E-learning?

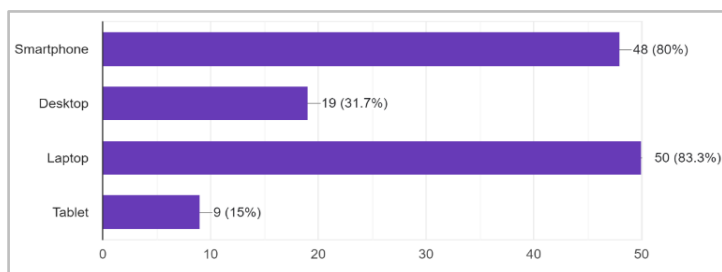


Figure 1

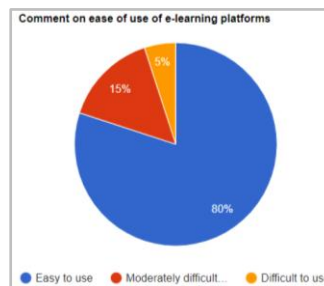


Figure 2

Figure 1 indicates which platform students use for their e-learning. 50% of the students selected Laptops as their primary and most effective device used for e-learning. Since smartphones are used widely around the world, 40% of students selected Smartphones as their platform for E-learning. Figure 2 illustrates the statement about how simple it is to use an e-learning platform. 80% of students choose to use the chosen e-learning platform. Just 5% of students chose that it is tough to use, while 15% chose that it is somewhat difficult to use, neither difficult nor simple to use.

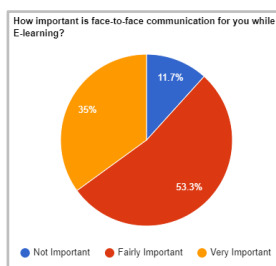


Figure 3

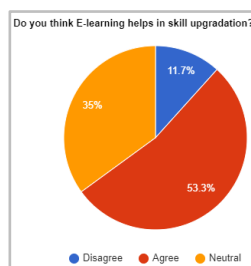


Figure 4

Figure 3 illustrates how crucial face-to-face contact is during online learning. Face-to-face communication during online learning was chosen by 53.3% of respondents. Face-to-face

communication is extremely essential to 35% of students when it comes to online learning, while just 11.7% said it is not important. Students' attitudes towards e-learning in skill development are clearly shown in Figure 4.

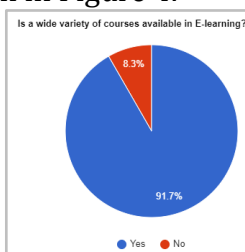


Figure 5

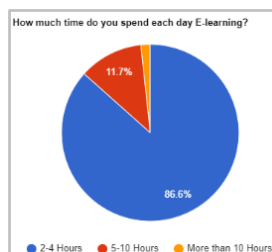


Figure 6

Also students' attitudes towards e-learning in skill development are clearly shown in Figures 5. Students frequently turn to online learning to improve their skills and get a competitive edge. While 53.3% feel that it aids in skill improvement, 11.7% don't. Figures 6 show how much time students spend using technology to study for their classes and how well they can focus.

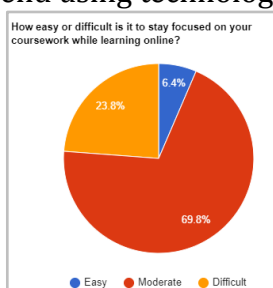


Figure 7

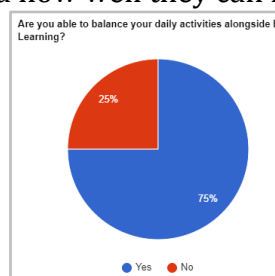


Figure 8

Figure 7 shows how much time students spend using technology to study for their classes and how well they can focus. The time spent is often between two and four hours, and the majority, or 23.8%, report finding it challenging to maintain concentration. Figure 8 shows whether students can manage their daily schedules and employment while participating in online learning. 75% chose yes while around 25% said they could not balance e-learning with their regular responsibilities.

● **Psychological Impact**

How does E-learning affect your Physical Health?

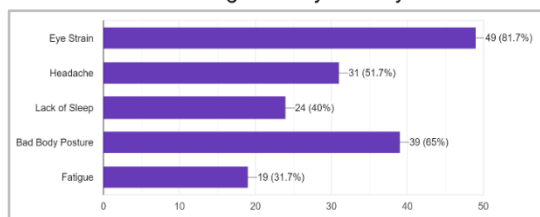


Figure 9

How does E-learning affect your Psychological Health?

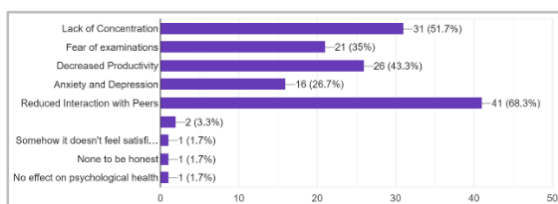


Figure 10

Figure 9 shows the impact of e-learning on the physical health of the students. Eye strain was chosen by around 81.4% of students, making it the most popular answer. Poor body posture, which received almost 65% of the votes, was the second most popular choice. Almost 31% and 40%, respectively, chose headache and lack of sleep. The option for fatigue was chosen by 31.7% of pupils. After physical health, figure 10 indicates the questionnaire included questions about the psychological effects of online learning. less contact with peers was chosen by 68.3% of students, making it the most popular choice. Then, almost 51.7% of students chose the option lack of

concentration, making it the second-most popular and second-most chosen choice among the students. Eventually, over 35% of students chose the choice for fear of exams, while 43.3% chose the option for Reduced productivity. Finally, about 26.7% chose the option for depression and anxiety.

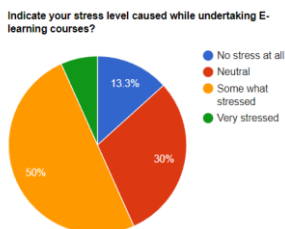


Figure 11

Figure 11 indicates a poll to determine the degree of student stress experienced during online learning was also added to the survey. The most popular and often chosen choice was somewhat stressed, which was chosen by 50% of the students. The second-most often chosen choice among students, neutral, was chosen by almost 30% of the pupils. No stress at all was selected by around 13.3% of the students, while severely stressed was chosen by about 6.7% of the students.

• **Affordability Impact:**

What is the cost range of courses that you enroll for?

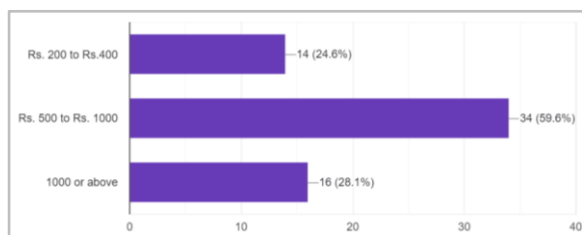


Figure 12

Do you think the E-learning courses are affordable?

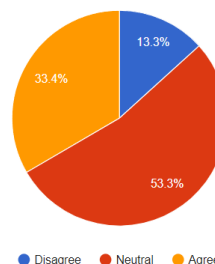


Figure 13

Students' opinions on whether pursuing e-learning or online learning is financially feasible based on the amount they spend on courses they enroll for are shown in figures 12 and 13. While 13.3% of respondents claim that e-learning is not economical, 33.3% affirm that it is both affordable and cost-effective.

• **Level of Effectiveness of e-learning**

How would you rate E-learning versus traditional method(in-person classroom teaching) of learning?

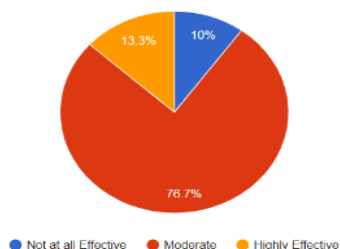


Figure 14

Figure 14 compares the effectiveness of traditional learning and teaching approaches with that of e-learning. Clearly, 13.3% of students believe that online learning is more successful than regular

classroom instruction. 10% of people, on the other hand, believe that traditional classroom instruction is more successful. Some of the reasons given by students for this include the lack of physical touch between students and teachers, which limits their capacity to respond to questions, as well as the extra attention that certain kids desire.

### **Conclusion**

The majority of students are comfortable with e-learning, based on the study's analysis of survey responses. The only hesitation that can be observed among students is how technology is affecting them physically and psychologically, with prolonged use of electronic devices leading to headaches and eye strains, as well as loss of attention, anxiety, fear of exams, and lower productivity despite the fact that they are only using them for a maximum of 4 hours per day. Students encounter these effects regardless of their age. Additionally, students believe that using e-learning helps them improve their skills and get useful knowledge in relevant fields of study. Students often view online education to be cost-effective and efficient, which is advantageous.

### **Recommendations & Suggestions**

Overall, the survey's participants expressed satisfaction with the convenience of online learning. However, as this study's findings show, students also think that face-to-face instruction and learning are essential. The authors suggest a hybrid method that would be more beneficial to the students based on the poll and the analysis that followed. This approach would be partially online and partially in-person. In-person teaching-learning may be more effective for addressing subjects that need problem-solving and practical training. E-learning platforms can implement this with little investment in infrastructure and use the same for conducting tests and exams ensuring fair assessment of the courses.

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