



Symbiosis Centre for Management Studies, Pune (Department of Symbiosis International (Deemed University))

Annual Research Journal of SCMS, Pune

ISSN 2348 – 0661
Volume 10



ANNUAL RESEARCH JOURNAL OF SCMS, PUNE
VOLUME 10, MARCH 2022

ISSN NO – 2348 – 0661

EDITORIAL BOARD

CHIEF MENTOR

Prof. (Dr.) S. B. Mujumdar

Founder and President, SYMBIOSIS

Hon'ble Chancellor, Symbiosis International (Deemed University)

MENTOR

Dr. Vidya Yeravdekar

Principal Director, SYMBIOSIS

Pro-Chancellor, Symbiosis International (Deemed University)

EDITORIAL BOARD

Dr. Adya Sharma

Dr. Dhiraj Jain

Dr. Sharmiladevi J.C

MEMBERS - ADVISORY BOARD

Dr. Rajani Gupte

Vice Chancellor

Symbiosis International (Deemed University)

Dr. Yogesh Patil

Associate Professor (Energy & Environment)

Head – Research & Publications, Symbiosis International (Deemed University)

Dr. George Lodorfos

Dean, Leeds Business School,

Leeds Beckett University

Research Cell, Symbiosis Centre for Management Studies, Pune

Dr. Dhiraj Jain, Associate Professor, Symbiosis Centre for Management Studies, Pune
Symbiosis International (Deemed University)

Dr. J. C. Sharmiladevi, Assistant Professor, Symbiosis Centre for Management Studies, Pune
Symbiosis International (Deemed University)

Dr. Jaysing Bhosale, Assistant Professor, Symbiosis Centre for Management Studies, Pune
Symbiosis International (Deemed University)

Message from the Chancellor

The Symbiosis International (Deemed University) practices and preaches the concept, ‘Vasudhaiva Kutumbakam - World is One Family’. It promotes friendship, cooperation and understanding between foreign and Indian students. Symbiosis today is the premiere educational institute of Pune and a brand equity in providing quality management education. The different Institutes that come under the umbrella of Symbiosis International (Deemed University) are the catalysts of change which contribute to the symbiotic growth of the students as well as the University.

Health and the well-being of humans had never been so fragile as it is today. The scale of the pandemic has also been unprecedented. Newer methods are now needed to be adopted so as to keep the process of learning going on. But at the same time, this new normal has thrown up several challenges. Uncertainty has itself become the new certainty. Teachers of higher education have become increasingly tech savvy. Mentoring and monitoring students, new and fast changing technology, online pedagogy and evaluation have now posed greater challenges to the teaching fraternity. Different approaches to pedagogies like- blended learning, collaborative approach to construction of knowledge, use of multimedia, open educational resources, new forms of assessments, self-directed and non-formal online learning were few of the approaches followed by many teachers/ institutions/ universities. There are no straight answers to a few of the questions like-Which teaching methods were the most effective? How could knowledge sharing through online education impact students’ skill development and formation? What is the effectiveness of online counselling to students? Which pedagogy, curriculum, evaluation system is the most effective? And the list could go on.

I would like to congratulate the entire team of SCMS on the launch of their Tenth Issue of the Journal – “Annual Research Journal of SCMS–Pune” on the theme “**Re-calibrating the role of Teachers/Educational Institutions/Universities in the Pandemic Era**”. This initiative taken by SCMS will take it forward by leaps on the path of recognition and reputation. I wish them good luck and success in all their endeavours.

Prof. Dr. S.B. Mujumdar

(Awarded Padma Bhushan and Padma Shri by the President of India)

Founder & President, Symbiosis,
Chancellor, Symbiosis International
(Deemed University)

Profile of the Pro-Chancellor

Dr. Vidya Yeravdekar is the Principal Director of Symbiosis Society, and the Pro Chancellor of Symbiosis International University. The Symbiosis International University is a multi-disciplinary, multinational, multi-cultural University that having 45000 students from all States of India and international students from 85 countries. The Symbiosis Society not only has under its ambit the Symbiosis International University but also has K12 Schools, College of Arts and Commerce and Museums- the Afro Asian cultural museum and the Dr. Ambedkar Museum.

Dr. Vidya holds a Post Graduate Degree in Medicine, a Degree in Law and Ph.D. in 'Internationalisation of Higher Education in India'. Having presented papers at various National & International Conferences, she has numerous research publications to her credit and has also authored several books. Ranked No.14 amongst India's top 25 Powerful Women, Dr. Vidya has been instrumental in bringing in innovative approaches to promote internationalisation of higher education in India.

As a member of University Grants Commission (UGC) for two terms, Central Advisory Board of Education (CABE) under Ministry of Education and Indian Council for Cultural Relations (ICCR) under Ministry of External Affairs, she has been a facilitator of innovative approaches to higher education in India.

Dr. Vidya has been appointed as a member of the expert group on Global Outreach of Higher Education, formulated by UGC to implement the National Education Policy 2020 that was rolled out by the Ministry of Education Govt. of India, member of the Advisory Group of Analytical and Advisory work (ASA), World Bank and member of the Board of Trustees of Muscat University, Oman.

She is a Chairperson of the FICCI Committee on Higher Education and serving 3rd term. Dr. Vidya has been appointed as Member of India Brand Equity Foundation (IBEF) Trust set up by Ministry of Commerce & Industries, Government of India, to promote the 'Brand India' label in overseas markets. She has elected as Member of the Central Governing Council of Services Export Promotion Council (SEPC) set up by Ministry of Commerce & Industry, Government of India, Member of the General Assembly of the Indian Council for Cultural Relations (ICCR) and Governing Body of Yashwantrao Chavan Academy of Development Administration (YASHADA), Government of Maharashtra. She is also the Board of Director of the Emcure Pharmaceuticals Ltd.

Dr. Vidya has been appointed as the first Chair of the OBREAL Global India Chapter a for a period of 3 years. She is a member on the Board of several organisations like Rayat Shikshan Sanstha, Research Committee of the Association of Indian Universities (AIU), Public Health Foundation of India, Symbiosis University of Applied Sciences Indore, Symbiosis Skills and Open University, Pune. She is a member of many corporate bodies such as Federation of Indian Chambers of Commerce & Industry (FICCI), Confederation of India Industry (CII), Maratha Chambers of Commerce and Industries (MCCIA) and Not for profit organisations like HK Firodiya Foundation, India International Centre (IIC), Pune International Centre (PIC) & Pune Citizens Police Foundation (PCPF).

She has also been a member on many other organizations such as Independent Director on the Board of RITES Limited under Ministry of Railways, Government of India, Education Quality Upgradation and Inclusion Programme (EQUIP) Committee, Ministry of Education, Govt. of India, Indian Institute of Corporate Affairs, Yeshwantaro Chavan Maharashtra Open University, State Knowledge Advisory Board of Higher Education, Government of Andhra Pradesh, Sub-Group on Higher & Technical Education and Skill Development of Chief Minister's Advisory Council, Government of Rajasthan.

Dr. Vidya's hard work has won her numerous awards and accolades. Her continuous endeavour to innovate and initiate has helped Symbiosis attain its present respect and admiration. Having accomplished all such feats, Dr. Vidya is now committed to shape the Indian higher education globally through her extensive work in the field of internationalisation of higher education.

Profile of the Vice-Chancellor

Dr. Rajani Gupte is the Vice Chancellor of the Symbiosis International (Deemed University). A distinguished academic, she received her Doctorate degree in Economics from the prestigious Gokhale Institute of Economics and Politics, Pune. She has been actively engaged with higher education for over 40 years, both as a professor and researcher. She has taught at many foreign universities as well, including the Oakland University, Michigan, US, and Bremen University of Applied Sciences, Germany.

She has been a part of the leadership team at Symbiosis for over two decades. She joined Symbiosis as a founding member of the Symbiosis Institute of International Business in 1992. She was the Director of the Institute between 2004 and 2012. Her headship led the Institute to be established as one of the top-ranking business schools in India. A capable institution-builder, Dr. Gupte has also earlier held the positions of Dean- Faculty of Management, Dean-Academics and Pro-Vice Chancellor at the Symbiosis International (Deemed University).

She is an independent Director on the Governing Board of NSDL and L& T Finance Holdings Ltd and some of its subsidiaries. She has been frequently invited on committees of important organizations, such as International Trade Panel - Confederation of Indian Industries (CII), World Trade Organization Committee, Govt. of Maharashtra, and Chemtech World Expo. She has also served on committees appointed by the UGC and on working groups on higher education.

Dr. Gupte is one of the ten women selected from across Asia who have attended the 'Women in University Administration programme' sponsored by the U.S. Department of State. She is a part of a Think Tank of eminent economists formed by NITI Aayog. She is also a member of NITI Aayog Consultation Group of Experts for the Education Vertical. *She has recently been appointed by UGC as a member of the Western Zonal Committee for the implementation of National Education Policy, 2020.*

Dr. Gupte has received several awards for her outstanding contribution to Education-

The Lokmat National Education Leadership Awards 2015, the "Swayamsidha Puraskar 2015" by Lions Club of Pune Elite, the 'Think Pure Award' by the 'Think Pure Social Welfare Foundation' in 2016, For being one of the most influential Vice Chancellors amongst the top 100 Vice Chancellors in India by the World Education Congress award in 2016, "The Iconic Leader Award - Creating a better world for all" at the WOMEN ECONOMIC FORUM 2017 and a "Visionary Eduleader of India" for being an institution builder at the hands of Shri Pranab Mukerjee, Former President of India.

Message from the Director

The past two years have been devastating and have shown us the impossible. Uncertainties across the world have increased and as the world is getting increasingly integrated, these uncertainties have only spilled over and have challenged us to be more competitive and watchful.

March/ April 2020: Months difficult to forget....the months when education Institutes closed worldwide.. This pandemic also hit the vulnerable the most. It further increased the pre- existing education inequalities. Lack of connectivity and devices excluded at least one third of students from pursuing learning remotely. (<https://en.unesco.org/covid19/educationresponse>)

In a way, this global crisis has also been an extraordinary time for learning. Overnight teachers had to train to respond to students' and families' needs with synchronous and asynchronous virtual instruction. They have truly risen to this occasion. All over the world the adaptability, the resilience of the education system, the policy makers, the faculty, students, parents and all stakeholders were truly appreciable. This also brought into focus the changing role of teachers. Teachers are no longer just a source of information but have a more important role to help the students analyze and evaluate the information. Teachers have to become the agents of change and it's not going to be easy. Innovation has suddenly moved to the center of many education systems, and a combination of technology with new pedagogical tools can help sustain and yet redefine the education system in a manner that prepares the youth for the ever-changing times.

The Tenth volume of “Annual Research Journal of SCMS”, Pune wishes to bring into focus the challenges for the academic world. The theme for this edition of the Journal is “Re-calibrating the role of Teachers/Educational Institutions/Universities in the Pandemic Era”. The Journal is indexed on J gate, ICI (Indian Citation Index) and archived on [academia.edu](https://www.academia.edu)

The present volume is an attempt to contribute towards building an academic body of knowledge based on the compilation of well researched and peer reviewed articles. The articles are well articulated and substantive and have tried to address the broad theme of the journal. I also extend my gratitude to all authors, editors and reviewers who have provided support at all stages. I also welcome suggestions that would help us improve the quality of our Journal.

Warm Regards,

Dr Adya Sharma
Professor and Director,
Symbiosis Centre for Management Studies, Pune
Symbiosis International (Deemed University)

From the Editorial Desk

The scale of the pandemic and its effect on human life has been unprecedented. As the pandemic has drastically changed the role of teachers, pedagogies, curriculum, schools and universities who are now forced to learn new skills, unlearn many previous learnings and relearn them. They have adopted newer methods so as to keep the process of learning going on. But at the same time, this new normal has thrown several challenges to them. Uncertainty has itself become the new certainty.

Teachers of higher education have become increasingly tech savvy. Mentoring and monitoring students, new and fast changing technology, online pedagogies and evaluation are now posing greater challenges to the teaching fraternity. Even though distance learning, online education, open education is not new, but, the degree of readiness for rapid transition to an all-online environment was highly unequal across countries and institutions posing a serious challenge to the overall teaching – learning process.

Different approaches to pedagogies like- blended learning, collaborative approach to construction of knowledge, use of multimedia, open educational resources, new forms of assessments, self-directed and non-formal online learning are few of the approaches followed by many teachers/ institutions/ universities.

There are no straight answers to a few of the questions like-Which teaching methods is the most effective? How could knowledge sharing through online education impact students' skill development and formation? What is the effectiveness of online counselling to students? Which pedagogy, curriculum, evaluation system is the most effective? And the list could go on.

From the students' side it has been identified that educational institutions are the true fulcrum for the functioning of the society. Everyone knew it but the pandemic brought it home. While institutions remained shut down which was even necessary, they have put a whole generation of kids at risk, wrecked the mental health of many people and have upended several households around the world. Online learning has clearly proved to be “**a poor substitute**” for physical classes. Kids still haven't caught up with the lost learning and those from the lower-income families are further behind. The stress has not only been incredibly difficult for children and their parents and teachers but also boiled over into political activism in many places, defining elections in some.

In pursuant to the above challenges SCMS Pune proposed their " **Tenth volume of the Annual Research Journal of SCMS Pune**" inviting original research papers, case studies, reflection papers, short term papers, review papers on the broad theme “**Re-calibrating the role of Teachers/Educational Institutions/Universities in the Pandemic Era**”.

The above issue sought to answer few of the challenges faced by higher educators due to the pandemic and how did they overcome them.

Richa Sharma and Sharmiladevi J. C in their study tried to study the trends of offering online courses via the MOOC platform and thoroughly compared various MOOC courses on various mentioned factors

Aaron Anselm Dsouza showed that majority of the students preferred face-to-face classroom learning rather than online learning and also found out that the motivation for majority of students has decreased in an online learning scenario due to COVID-19 ensuing pandemic.

Shruti Sharma and Adya Sharma explored new perspectives with changing times, which was a core principle of building knowledge and provided a fresh perspective for novel enquiries and actions.

Sameera A Raees explored the job of National Company Law Tribunal under various laws, as it offered incredible help to the corporate and has significantly impacted the Indian Corporate law.

Sajeesh discussed the impact of technology adoption across various stakeholders throughout the educational process, with a clear consequence for engagement, knowledge acquisition, and other learning-related factors. He also exposed variables that should be explored for producing more interactive tools and applications for improved engagement.

Vishrut Ashish & Dr. Sabiha Fazalbhoy in their study concluded that factors such as the use of social media, analysis of stock/cryptocurrency performance, peer influence, etc. have a significant cumulative precision-based impact in educating the young investor and determining the level of investments made in cryptocurrency and the stock market along with showcasing other individual trends.

In pursuance to the above the institute was also awarded the Shastri Conference and Lecture Series Grant (SCLSG) for organizing a lecture series on ‘Sustainability strategies - dealing with uncertainty for two days (10th - 11th March 2022). The lecture series addressed the key challenges and innovations in different business domains pre and post-pandemic. The lecture series started with a lecture by **Mr. Ashok Namboodiri** (CBO at ZEE Entertainment Enterprises Private Limited) on the topic ‘**Strategic shift of Marketing to Digital paradigm**’ where he discussed how the role of Chief marketing officer had changed over a period of time. Big giant companies like Uber, Coca-Cola, Johnson and Johnson had removed the position of Chief Marketing Officer as there was a paradigm change in the marketing requirements. He inspired the students to leverage the knowledge and the happenings around them and experience what made them feel good. His session was followed by **Dr. Boria Majumdar** (academician, a researcher and a sports journalist), who spoke on the topic ‘**Management Lessons from world of Sports**’ and talked about well-known Indian sports players who have represented India at the Olympics and their inspiring stories. He discussed how Indian sports’ players represent the nation and perform for the country leaving

behind their personal achievements, glory and ego. The next lecture was by **Mr. Saurabh Tripathi (Director, Risk Consulting at KPMG)** who talked on the topic ‘**Fintech is new normal**’. He talked about how Fintech had grown at a phenomenal rate in last 10 years and adopted not only to outreach more customers but also to increase their experience.

Day 2 of the virtual lecture series started with a session by the guest of honour, **Dr Bruce Kidd** (Dr. Bruce Kidd, University Ombudsperson, Professor Emeritus, University of Toronto) on ‘**Sports Leadership after Covid-19**’ who addressed the subject of sports and its importance at the micro and macro levels. The session highlighted why we should invest in sports and what a youth sport may be like. The sports participants should feel in sync with the sports program and should have access to equipment and necessary facilities.

The lecture was followed by a session by **Mr. Saurabh Nigam (Vice President- Human Capital at Omidyar Network India)** on the topic ‘**People first in New Normal**’. He emphasized on 3 points in HR management during and after pandemic. There is point of arrival, point of departure and preparing for the new normal. He stressed on the fact that organisations should be more resilient and should focus on the well-being of employees. He advised that old methods of rigid policies, processes, standardized hiring, and fixed skills are required to be relooked and reformed.

The lecture series concluded on a positive note with a discerning take on ‘**Changing landscape of Education Sector**’ by **Dr Adya Sharma, Director, Symbiosis Centre for Management Studies, Pune** who emphasized the key points of the National Education Policy which were in line with the changing landscape of education. The changing role of teachers and the importance of innovative pedagogy were discussed in detail.

Contents

Message from the Chancellor	i
Profile of the Pro-Chancellor	ii – iii
Profile of Vice-Chancellor	iv
From the Director’s desk	v
From the Editorial Team	vi - viii

Index

Paper No.	Title	Authors	Page No.
1.	Impact of COVID-19 on the Motivation of Students in Educational Institutions	Aaron Anselm Dsouza	1- 11
2	Not a Paradox: Revisiting the Personalization-Privacy Relationship as an Assemblage	Ms. Shruti Sharma, Dr. Adya Sharma	12 - 30
3	An Overview of Indian MOOCs	Ms. Richa Sharma, Dr. Sharmiladevi J.C	31 - 42
4	National Company Law Tribunal – The New Era of Corporate World	Dr. Sameera A Raees	43 - 52
5	A Study on Impact of Teaching and Learning Through Technology Adoption, Exploration and Presentation	Mr. Sajeesh hamsa	53- 58
6	Impact of Covid-19 on Investment education and Behavior in cryptocurrency and stock market:- A Study of Indian Undergraduate Students	Vishrut Ashish & Dr. Sabiha F.	59- 79

Impact of COVID-19 on the Motivation of Students in Educational Institutions

Aaron Anselm Dsouza

Symbiosis Centre for Management Studies, Pune
Symbiosis International (Deemed University)
aarondsouza.2020@associate.scmspune.ac.in

Abstract

This research was conducted to ascertain the impact of covid-19 on student's motivation in educational institutions. A survey was conducted on 236 students majorly belonging to schools in India and the United Arab Emirates. The survey aimed at understanding the preferences of the students, the various ways in which the institution kept the students motivated, the overall performance, and finally the mental and physical health of the students in an online scenario.

The study showed that 77% of the students preferred face-to-face classroom learning rather than online learning and 90% of the students claimed that they could grasp and gain more knowledge from face-to-face classroom learning. It also ascertained the various ways and steps that were adopted by the institutions to keep the students motivated such as online competitions, online graduation ceremonies, creative writing competitions, additional courses, virtual inter-institution competitions, online quizzes, etc. 79% of the students also said that the teachers could adapt to the online scenario and include innovative learning methods in their teaching. This research found out that the motivation for majority of students has decreased in an online learning scenario due to COVID-19.

Keywords – COVID-19 Pandemic, online learning, face-to-face learning, hybrid learning, motivation.

Introduction

1. COVID-19: The Pandemic

In a TED talk back in 2015, (Gates) said “If anything kills over 10 million people in the next few decades, it’s most likely to be a highly infectious virus, rather than a war.” Four years later in the month of November 2019, it became a reality. On March 11, 2020, the World Health Organization (WHO) declared COVID-19 as a global Pandemic. COVID-19 short for Coronavirus Disease 2019 is caused by a Novel Coronavirus called Severe Acute Respiratory Syndrome Coronavirus 2(SARS-CoV-2). The Coronavirus spreads rapidly and infects your lungs and respiratory track causing fever, cough shortness of breath, sore throat, loss of smell and in extreme cases even death. Approximately, 4.4 million people have died and over 200 million people infected due to the virus.

In order to restrain the spread of the virus, countries worldwide imposed lockdowns resulting in the decline of their economies. However, with the passage of time, countries are adapting to live with the virus calling it the ‘New Normal’ and slowly but steadily reopening its economies to recover the losses incurred.

The pandemic has changed the way we channelize the use of technology. In a broad sense, everything has shifted to ‘online mode of life’, including teaching and learning. The term online here is referred to as using a device which mediates communication between various people and the conduction of innumerable activities over the internet and a wireless platform without the need for physical presence. With the closure of schools, universities and educational institutions all over the world, it became difficult for students belonging to the lower income groups of the society to continue with their studies as they did not possess the resources and technology to facilitate online learning.

Pharmaceutical companies have developed an effective vaccine against the coronavirus and with the help of government instituted vaccination drives all over the world, we aim to reduce the spread of the virus.

2. Education: The Shift in Learning

Giving all due credit to an organism that is invisible to the human eye, the governments and ministries of around 186 countries have instructed schools, universities and educational institutions to temporarily close down its premises and facilitate an online mode of education. This gave rise to Emergency Remote Learning (ERL), (Khlaif Z.N., 2021) which refers to an unplanned and sudden shift from the traditional face-to-face classroom learning to one that is done remotely by students and teachers in the comfort and safety of their homes. This affected approximately 1.5 billion students across the world (Society, 2020).

The educational institutions with instructions from the governments along with their own autonomy have come up with various ways to implement online learning. Teachers use a

combination of synchronous and asynchronous methods, wherein the teachers would be teaching live through a digital platform and also upload material online so that the students can learn at their own pace respectively. Digital platform such as Google Meet, Google Classroom, Microsoft Teams, Zoom Meetings, WhatsApp calling etc., are being used to impart education to students online. The institutions also tend cater to the extra-curricular activities such as, online competitions, online events, online sports etc., for students through these platforms. They also encourage and provide various MOOCs to students from platforms which helps students to gain wider knowledge. In recent times, with easing lockdowns, the educational institutions are shifting to a (Maria Barron, 2021) hybrid mode of learning wherein there is a mixture of remote and in-person learning. Online learning has so many perceived pros and benefits. However, the question still remains whether the students are really increasing their knowledge and are motivated towards learning in this new setup

Literature Review

(Afif Ikhwanul Muslimin, 2020) found out in their research that students derived their motivation from the goals of completing the particular course with good scores rather than gaining knowledge. The students faced challenges such as internet connection issues, limitations of the WhatsApp features and anxiety. They had concluded that despite the online scenario and challenges faced by the students, they were motivated and completed the course. (Baber, 2020) conducted a cross country research in India and South Korea indicated that factors such as interaction in classrooms, student motivation, course structure, instructor knowledge and facilitation had a positive influence on the students which implies that the students even in an online mode of learning were motivated, satisfied and were able to achieve their perceived learning outcomes.

(Ernie Avila, 2020) conducted research to find out whether students were motivated in the online mode of learning. The data was obtained using the motivated strategies of learning questionnaire formulated by Duncan and Mckeachie (1991). The findings revealed that the students agreed that they were motivated and utilized the various learning strategies to support self-paced learning provided by the institute despite the COVID-19 pandemic.

(Gustiani, 2020) found out that the students were more intrinsically motivated by their ambition to gain new knowledge and the enjoyment in a new learning experience, their motivation was also affected by external factors such as avoiding compensation for absenteeism and proper environmental supporting facilities. However, a few respondents lacked motivation due to problems such as frustration in technology, electricity problems, bad signals and delays in voice leading to decreased motivation and the belief of being left out. Furthermore, (Putu Subakthiasih, 2020) found that first semester university students had a higher intrinsic motivation than extrinsic motivation for learning an English course during the Pandemic.

(T. Gonzalez, 2020) found out that there was a significant positive effect of online learning on the students' performance due to COVID-19 and concluded that the COVID-19 pandemic helped in changing the students' learning strategies to a more continuous habit thereby improving their efficiency; and this was reflected by better scores in assessment and improved learning performance. (Fatonia, 2020) showed that the students' perceptions of online learning shows that they have a strong desire to excel and grow in their academic's despite of all the complications relating to online learning.

(Mirna Fawaz, 2020) found out that online learning has given rise to issues such as depression and anxiety problems among UG university students and concluded that there was a significant correlation between student satisfaction and prevalence of disorders like anxiety, depression, and stress due to a sudden shift of learning to an online mode and increased workload. (Thomas Volken, 2021) found out that more than 25% of Swiss university students (n = 3571) showed signs of depressive symptoms and other mental health related issues during the pandemic, which was higher when compared to the Swiss population (n = 2328), and finally (Islam M.A, 2020) found out that Bangladeshi University Students were experiencing heightened level of anxiety and depression due to the COVID-19 pandemic.

(Hermanto, 2021) found out in their research that 52.5% of the total student respondents (n = 238) in their survey did not enjoy learning from home and 91.5% of the respondents didn't gain knowledge or skills from online learning as compared to traditional classroom learning. However, despite these issues their motivation to learn was still high probably due to factors such as completion of assignments, high confidence in accomplishing the assignment for good grades, and achieving their goals. Furthermore, they had better and improved relationships with their family members. (Baczek M, 2021) through their survey conducted on medical students they found out that E-learning was less effective than physical classroom learning in terms of increasing students' skills and social competences, however it was effective in increasing and gaining more knowledge as they found that there was no statistical difference between physical and online learning in terms of opinions on the ability of the learning method to increase knowledge.

There are conflicting thoughts among researchers as to whether the online mode of learning has hindered the motivation and performance of students or proved beneficial to students or find no correlation at all. Therefore, this study tries to make an attempt to solve this conflict.

Rationale of the Study

A prolonged period of online learning can impact upon the motivation of students. The studies that have already been undertaken by other researchers either has a very small sample size, a restrictive age/grade category or a time period which was just a few months after COVID-19 was declared a

pandemic. Hence, this does not show a clear picture of the behaviour and levels of motivation among students.

This study is therefore conducted to ascertain the motivation levels among students with larger sample size, no restriction in terms of gender/age/grade of students and a larger time period of nearly 17 months after the declaration of COVID-19 as a pandemic. Hence, it was important to take all these factors into consideration to ascertain the required research objective.

Objectives and Scope of the Study

Objectives:

- To find out the motivation of students attending online classes due to the COVID-19 Pandemic.
- To find the factors that affect the motivation of students in online classes.

Scope:

The scope of the research is to ascertain how online learning has impacted the motivation and resulting behaviour of the students due to the pandemic.

The study focuses on 5 main aspects the age category of the students, the preferences of the students, role played by the institutions in online scenario to motivate students, the overall performance of the students and finally how online education has affected the mental and physical health of the students.

Research Methodology

For the purpose of the study primary data was collected via a questionnaire that was prepared using Google forms which consisted of 14 questions. The questionnaire was circulated to the population through the social media platform of WhatsApp. The population consisted of students who are undertaking online education due to COVID-19. The sampling of the population was done on a random basis. The primary data was collected from 236 students i.e., the sample size is 236. The sample majorly consisted of students belonging to India and the United Arab Emirates. The sample also consisted of 1 student from Latvia and 1 student from Germany. A Descriptive statistical analysis was conducted on the primary data collected by using Pie Charts and Bar Diagrams. The conclusion of the research was based on the analysis done.

Data Analysis and Interpretation

1. Category of Respondents

The data collected was of students mostly living in India and the United Arab Emirates and one respondent from Latvia and Germany respectively. Students belonging to the age category of below 11 years and 12 – 14 years are considered as lower levels students (grade 9 and below); students belonging to the age category of 15 – 17 years are considered as high school students (grade 10-12); and students belonging to the age category of more than 22 and 18 – 21 years are considered as university students.

The age group of the students is categorized in the table as follows:

Age	Students
12 - 14 Years	48
15 - 17 Years	83
18 - 21 Years	88
Less than 11 Years	12
More than 22 Years	5
Total	236

Table1: Age categories of the Students

37% of the sample consist of students belonging to the age category of 18-21 years, 35% to the age category of 15-17 years, 21% to the age category of 12-14 years, 5% below 11 years and 2% above the age of 22 years. This indicates that the majority of the sample consists of high school and university students.

2. Preferences of Students

The preference of the students relating to online learning versus physical classroom learning was taken. 77% (n = 181) of the students preferred physical classroom learning and only 23% (n = 55) of the students preferred an online mode of learning. A majority of university students (n = 79) preferred classroom learning followed by high school (n = 55) and lower levels (n = 47) students rather than an online mode.

On the other hand, high school students (n = 28) showed more interest in online learning than lower-level (n = 13) and university students (n = 14).

Furthermore, it was revealed that 90% of the students could gain and grasp knowledge more easily from physical classroom learning and the remaining 10% from online Learning. The reason behind this gap would be the added disturbances that come with online learning, which hinders the motivation of students to study and learn. A brief description of the problems and distractions that students stated in the survey that they were facing during online learning are as follows:

a. Social Media Platforms

- b. Internet platform.
- c. Family distractions
- d. Network and range issues.
- e. Technical Difficulties
- f. Power outages and unstable connections.
- g. Streaming services such as Netflix.
- h. Background noise from house works.
- i. Consumption of food and beverages at any given time.
- j. Television.

All these distractions create a situation wherein the students lose their motivation to learn, leading to problems like the inability to concentrate, laziness, tiredness, procrastination, sleeping disorders among the students, etc.

3. Role of The Institution

Approximately 40% of the respondents ascertained that their institution did not motivate the students to take part in various extra-curricular activities in an online mode. However, the remaining students mentioned that their institution provided an umpteenth of opportunities and events for students to participate and thereby stay motivated in the online scenario. The institutions organized events such as debates, clubs, online sports competition, online graduation ceremony, creative writing competitions, additional courses, virtual inter-institution competitions, online quizzes, Dance and music activities, project-based learning, MUN conferences, talent day, online speeches, thematic events, online seminars and workshops, yoga and fitness activities, and institution fests.

Apart from extra-curricular activities, the conduct of teachers in the online scenario is one of the main factors that affect students' motivation and learning behaviour. 79% of the students (n = 187) claimed that the teachers could adapt to the online mode and conduct teaching and learning in an efficient manner. They would include various activities in their learning to keep the students motivated such as PPTs, videos, Kahoot! quizzes, Prezi presentation, group discussion and projects, experiential learning tasks, virtual laboratory demonstrations, flip teaching, pop quizzes, teaching with real life examples, virtual learning games, learning platforms like Socrative, Padlet, GeoGebra, Mentimeter and Nearpod, Case studies and research papers.

The unplanned shift to an online mode of teaching was not an easy task for teachers as much as it was for students, since primarily the teachers themselves had to adapt to the new scenario and further make online classes interesting for the students to stay motivated.

4. Performance of Students

Students' motivation can be ascertained by their performance in their assessments and examinations. So, it is plausible that if the grades of students have increased, then in order to

achieve those higher grades they must have been more motivated to study. Hence, achieve higher grades and vice-versa.

50% of the students (n = 118) claim that their grades in the online mode of learning have been the same and has not changed substantially as compared to the offline mode. However, 36% of the students (n = 86) have found their grades to have decreased due to online learning and only 14% students (n = 32) saw an increase in their grades and performance. The major reason to the stagnation and fall in the grades could be accounted for all the demerits of online learning that have been discussed so far.

Physical and Mental Health

The data collected for this portion is astonishing as well as a matter of concern. 72% of the students (n = 171) claim to be alone and isolated due to the pandemic and even with enhancements in technology they were unable to sense a connection with their friends and institutions for learning. Online learning cannot create nor recreate the physical face-to-face classroom learning scenario, this sense of the lack of human touch and staring at machines every day, leads to the feeling of isolation and loneliness among students.

There is a greater magnitude of university students feeling lonelier as compared to high school or lower-level students, the probable reason behind this is that the majority of university students have not yet been to their campus and have not acquainted with the people they interact online on a daily basis. The students perceive a sense of slack in their physical, mental and social well-being. A majority of students mentioned that due to online classes they have a weak attention span, lack focus, feel lethargic, anxiety, physical pains such as headaches, neck, and back pains, visual impairment and eye strains, depressive state of mind, lack of exercise, weight gain, reduced interaction with teachers and friends leading to social awkwardness, frustration, stress and pressure due to increased workload, lack of sleep and decreased productivity. These critical problems demotivate students and further leads to devastating health problems. However, approximately 34% of students (n = 81) did not face any issues with online learning and in fact managed time for physical exercise and meditation.

Findings and Conclusion

For more than a year and a half COVID-19 is still haunting our lives. Educational institutions are facing the drastic effects of COVID-19, as it is much more difficult to teach and learn in an online scenario. The sudden and uncalled shift to an online mode of education made it even more difficult for the students and teachers to adapt. However, with the passage of time educational institutions with safety precautions in place as instructed by the authorities are opened or are planning to open its campuses to the students. With the fear of the virus, 36% (n = 38) of the responded preferred online learning whereas 35% (n = 83) of the respondents preferred to learn by physically going to

their educational institutions. However, 49% of the students (n = 115) wanted a hybrid mix of online and classroom learning, wherein certain students attend physical classes, while others attend classes virtually from their homes.

From the data analysis it is evident that the majority of students were facing problems due to online learning which hampered their motivation resulting to stagnation or decrease in their overall performance and growth. A hybrid mix of learning would solve a lot of issues. Students now would have the option to choose from, according to their preferences of online or physical learning. It would significantly reduce the disadvantages that come with online learning. Students can feel connected, be more active and healthier in their lifestyle, gain knowledge more efficiently, socialize and most importantly be more motivated.

To conclude, COVID-19 has negatively impacted the lives of students which caused a fall in their motivation to participate, learn and grow. It is evident from the factors such as preference of classroom learning, distractions in an online mode, lack of participation, stagnation and decline in the grades, jeopardized health and finally the feeling of loneliness and isolation have led to the decrease in motivation among the majority of students. Hence, both the research objectives have been met. The research in its future scope would entail a larger sample size covering a diverse range of students and assess how COVID-19 has impacted specific types of motivations among the students.

References

- Afif Ikhwanul Muslimin, F. H. (2020). Online Learning During Pandemic: Students' Motivation, Challenges, and Alternatives. *13(02)*, 60-68.
- Aguilera-Hermida, A. P. (2020). College students' use and acceptance of emergency online learning due to. *International Journal of Educational Research Open*, 1.
- Alireza Mirahmadizadeh, K. R. (2020). Evaluation of students' attitude and emotions towards the sudden closure of schools during the COVID-19 pandemic: a cross-sectional study. *BMC Psychology*, 8, 1-7.
- Baber, H. (2020). Determinants of Students' Perceived Learning Outcome and Satisfaction in Online Learning during the Pandemic of COVID19. *Journal of Education and e-Learning Research*, 7(3), 285-292.
- Baczek M, Z.-B. M.-K. (2021). Students' perception of online learning during the COVID-19 pandemic: A survey study of Polish medical students. *Medicine*, 100(7), 1-6.
- Cristina Romero-Blanco, J. R.-A.-Z.-F.-L.-M. (2020). Physical Activity and Sedentary Lifestyle in University Students: Changes during Confinement Due to the COVID-19 Pandemic. *Int. J. Environ. Res. Public Health*, 17, 1-13.

- Ernie Avila, A. M. (2020). Motivation and Learning strategies of Education Students in Online Learning During Pandemic. *PSYCHOLOGY AND EDUCATION*, 57(9), 1608-1614.
- Fatonja, N. A. (2020). University Students Online Learning System During Covid-19 Pandemic: Advantages, Constraints and Solutions. *Sys Rev Pharm*, 11(7), 570-576.
- Gates, B. (2015). The Next Outbreak? We're not ready. Retrieved from https://www.ted.com/talks/bill_gates_the_next_outbreak_we_re_not_ready?language=en#t-46098
- Gustiani, S. (2020). STUDENTS' MOTIVATION IN ONLINE LEARNING DURING COVID-19 PANDEMIC ERA: A CASE STUDY. *HOLISTICS JOURNAL*, 12(2), 23-40.
- Hermanto, N. G. (2021). Students' opinions about studying from home during the COVID-19 pandemic in Indonesia. *Cypriot Journal of Educational Sciences*, 16(2), 499-510.
- Islam M.A, B. S. (2020). Depression and anxiety among university students during the COVID-19 pandemic in Bangladesh: A web-based cross-sectional survey. *PLOS ONE*, 15(8), 1-12.
- Khlaif Z.N., S. S. (2021). Emergency remote learning during COVID-19 crisis: Students' engagement. *Educ Inf Technol*.
- Maria Barron, C. C.-N. (2021). *What is Hybrid Learning? How can countries get it right?* Retrieved from <https://blogs.worldbank.org/education/what-hybrid-learning-how-can-countries-get-it-right>
- Md. H Asibur Rahman, M. S. (2021). Investigating the mediating role of online learning motivation in the COVID-19 pandemic situation in Bangladesh. *Journal of computer Assisted Learning*, 1-15.
- Mirna Fawaz, A. S. (2020). E-learning: Depression, anxiety, and stress symptomatology among Lebanese university students during COVID-19 quarantine. *Wiley Periodicals LLC*, 52-57.
- Nambiar, D. (2020). The impact of online learning during COVID-19: students' and teachers' perspective. *The International Journal of Indian Psychology*, 8(2), 783-793.
- Patricia Tempski, F. M.-C. (2021). Medical students' perceptions and motivations during the COVID-19 pandemic. *PLOS ONE*, 16(3), 1-8.
- Piya Majumdar, A. B. (2020). COVID-19 pandemic and lockdown: cause of sleep disruption, depression, somatic pain, and increased screen exposure of office workers and students of India. *CHRONOBIOLOGY INTERNATIONAL*, 37(8), 1191-1200.

- Putu Subakthiasih, I. G. (2020). AN ANALYSIS OF STUDENTS' MOTIVATION IN STUDYING ENGLISH DURING COVID-19 PANDEMIC. *Linguistic, English Education and Art (LEEA) Journal*, 4(1), 126-141.
- Ronnie E. Baticulon, J. J. (2021). Barriers to Online Learning in the Time of COVID-19: A National Survey of Medical Students in the Philippines. *Medical Science Educator*, 31, 615–626.
- Scott, W. G. (2015). *Motivation and Characteristics of motivation*. Retrieved from <http://marketingmgt solution.blogspot.com/2015/09/motivation-and-characteristics-of.html>
- Sitar-Taut, D.-A. (2020). Mobile learning acceptance in social distancing during the COVID-19 outbreak: The mediation effect of hedonic motivation. *Hum Behav & Emerg Tech.*, 3, 366-378.
- Society, I. (2020). *Impact Report 2020*. Retrieved from https://www.internetsociety.org/impact-report/2020/?gclid=CjwKCAjwyIKJBhBPEiwAu7zll00Tqu9zTyqw4fYvvJTpMxDIfnpA5ql9rfH7Seu-WPXA6l4-ahAV4RoCXZAQAvD_BwE#education-in-pandemic
- Sonia Zaccoletti, A. C. (2020). Parents' Perceptions of Student Academic Motivation During the COVID-19 Lockdown: A Cross-Country Comparison. *Front. Psychol.*, 11, 1-13.
- Sutarto Sutarto, D. P. (2020). Teacher strategies in online learning to increase students' interest in learning during COVID-19 pandemic. *Jurnal Konseling dan Pendidikan*, 8(3), 129-137.
- T. Gonzalez, M. A.-L. (2020). Influence of COVID-19 confinement on students' performance in higher education. *PLOS ONE*, 15(10), 1-13.
- Thomas Volken, A. Z. (2021). Depressive Symptoms in Swiss University Students during the COVID-19 Pandemic and Their Correlates. *International Journal of Environmental Research and Public Health*, 18(4), 1-14.
- WHO. (n.d.). *Coronavirus Disease COVID-19*. Retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

Not a Paradox: Revisiting the Personalization-Privacy Relationship as an Assemblage

Shruti Sharma

Ph.D. Research Scholar,
Symbiosis International (Deemed University)
India-411057
Shruti0203@gmail.com

Dr. Adya Sharma

SCMS, Symbiosis International (Deemed University)
Viman Nagar, Pune, India-411014
adyaindia@gmail.com

Abstract

Recognizing ever changing contexts and resultant interactions are imperative to generate novel perspectives. Personalization-privacy relationship has been treated as a paradox and this constructed perpetual polarity, disguising the fact that they are two sides of the same coin and working in the same environment. With devices increasingly becoming personal, expectations of users have increased too, which paved way for hyper-personalization. It creates the need to revisit and re-evaluate privacy paradox notion. Embracing privacy issues as a constraint of business would lead towards practical solutions. This paper dives deep in the assumptions of paradox using problematization method and proposes an alternative view of it as an assemblage. It is argued that these mutually interactive and evolving elements should be comprehended in assemblage rather than in isolation. Once it is accepted as process, different efforts can be put towards better framing of privacy statements and for awareness too. This paper contributes towards exploring new perspectives with changing times, which is a core principle of building knowledge and this paper provides a fresh perspective for novel enquiries and actions.

Keywords: Privacy; Paradox; Personalization; Assemblage theory; Problematization

Not a Paradox: Revisiting the Personalization-Privacy Relationship as an Assemblage

1. Introduction

Changing user preferences demand better engagement, more than just behavioural targeting. Addressing them with personalization is important to the customers as well as marketers. Personalization, as a term, has been used in literature to describe variety of actions. Personalization is a collection of fragmented ideas like segmentation, targeting and customisation, based on context, data used and initiator of it (Strycharz, van Noort, Helberger, & Smit, 2019). Users want to be considered more, 48% of users prefer to be distinct and more selective. They are pressed for time more than ever and so the expectations of engagement have also been transformed. Instant gratification and smooth stress-free experiences which suits efficiency-driven lives are most welcome (Euromonitor, 2019). Loads of options and information coupled with time pressed lifestyle makes a strong case for preference-based targeting. Too many options are desirable and attractive initially but there is resultant frustration with decision-making process and dissatisfaction afterwards (Iyengar & Lepper, 2000).

Employing technological advances to ensure a simple and efficient path to purchase has become essential, rather than optional. Online Behavioural advertising has been effective in closing transactions, if advertisements are less but more relevant; helps in reducing information overload and is received positively by the user (Strycharz et al., 2019). Benefits of personalization do exist for users as well as practitioners. Awad and Krishnan (2006) speculated that a fraction of users is of privacy fundamentalists (Westin, 2003), who are unwilling to value personalization irrespective of the privacy features implemented by the firms. Xu, Luo, Carroll, & Rosson (2011) studied privacy concerns in context of location aware marketing and found that relevant and contextual personalization is considered valuable and somehow outweighs privacy concerns. Users' need greater control, transparency over how the data is used; while being fascinated by novelties that help them avoid queues, save time, synchronise and organize their personal information and preferences (Euromonitor, 2019). This makes obvious for the firms to focus their efforts towards larger category of privacy pragmatists and privacy unconcerned category who are willing to participate in personalization (Awad & Krishnan, 2006; Westin, 2003). Every business would try to woo the target audience and reduce irrelevant advertising, which further brings advantages like increased revenues, better click and response rates, loyal users, higher persuasion. Personalization can alter behavioural intentions of users and reduce acquisition costs by increasing marketing efficiency, which increases revenue too (Ariker, Heller, Diaz, & Perrey, 2015). Businesses are ready to spend more for lesser, but right targeted advertising, which is beneficial to both advertisers and costumers. Relatively weak impact of personalization is observed in case of preference mismatch whereas relevant content made user attitudes positive (Sundar & Marathe, 2010). Even after targeting right person at right time, quality of content or recommendation is

valued and inevitably rich data profiles are needed to achieve the same (Lee & Cranage, 2011), which bring privacy concerns into the picture.

Norberg, Horne, and Horne (2007) established the term “*privacy paradox*” as the relationship between intentions and actual behaviour towards personal information disclosure, where it was found that users freely provided personal data despite having complaints (Sutanto, Palme, Tan, & Phang, 2013; Bandara, Fernando, & Akter, 2020). The term paradox conveys numerous and wide-ranged meanings. It has been often used to explain conflicting demands, polarizing notions, or apparently illogical findings; though labelling them as paradox does not essentially promote understanding of phenomenon. Even human existence has been viewed as paradoxical, due to tensions between life and death (Lewis, 2000). “*It’s a paradox*” has become overused and underspecified. The whole thing is paradox that way, reward of efficient production is boosted consumption (Beam, 1994). The notion of privacy paradox was referenced initially to describe the baffling divide in connection with social networking sites, where youngsters were sharing private lives online without comprehending its implications but older generations were fighting for privacy (Barnes, 2006); however, this assumption about youngsters that they are not protective of their private information has been challenged (Blank, Bolsover, & Dubois, 2014).

This paper contests the notion of privacy paradox and posits that privacy is a constraint in hyper-personalization environment, but not a paradox. Shifting the efforts from preventing data collection to data usage and handling may lead towards better solutions and renewed investigations. This paper uses qualitative enquiry to capture the relative nature (Sofaer, 1999) of the personalization-privacy relationship and contributes in bringing the focus towards the potential positive impact of changing perspective towards privacy issues. Problematization method (Alvesson & Sandberg, 2011) is used to contest the privacy paradox notion and an alternative view of it as an assemblage (Deleuze & Guattari, 1995; DeLanda, 2015) is proposed.

This paper is organized further as follows: Conceptual background of various explanations of paradox in brief is discussed, then problematization method is described. Concept of privacy is understood to contest the notion of paradox. Then, alternative view of personalization-privacy assemblage is proposed, followed by discussion.

2. Conceptual background

Consumers share ample information in practice and various explanations are provided for such behaviour. The inconsistency in privacy attitudes and privacy behaviour, termed as paradox, is interpreted with help of social theory, psychology, behavioural economics and quantum theory. Focus of current privacy paradox research is on construing the gap between privacy attitude and privacy behaviour (Kokolakis, 2017). Concept of privacy is subjective and privacy paradox has been interpreted through various theoretical lenses. Some of the conclusions are following from literature on privacy paradox explanation.

Decision making in real world is largely influenced by wealth frame or by gains and losses (Kahneman, 2003). Users’ intention to reveal personal information is based on cost-benefit trade-

off where they want most positive and least negative consequences (Knijnenburg et al., 2018; Pappas, 2018), try to maximize benefits and minimize cost (Fife & Orjuela, 2012), or evaluate risks against the gains to be received, like more customized deals and discounts. This outlook treats privacy as a quantifiable commodity (Aguirre, Roggeveen, Grewal, & Wetzels, 2016). Privacy calculus theory has been used widely to understand privacy behaviours of users who trade part of privacy in exchange for perceived benefits which they consider worth the risk of information disclosure (Dinev & Hart, 2006). Privacy trade-off in mobile app context becomes more specific as smartphones have become self-extensions and very personal to user and also, a permanent company (Wottrich, van Reijmersdal, & Smit, 2018). Mobile applications offer many values or perceived benefits to users like social interaction, information search, entertainment and shopping. Even if user is aware of privacy risks and safety procedures, they might be unable to take rational privacy-sensitive decisions (Wottrich et al., 2018). A reluctance to pay in monetary terms indicate disposition of consumer to provide information as the cost of receiving benefits or services. Free apps are downloaded more often than paid ones (Fife & Orjuela, 2012). Receiving personalization benefits like better recommendations, communication and overall better experience include bearing costs like privacy risk, spams, unintended price differentiations and many more (Strycharz et al., 2019). Xu et al. (2011) also supports the notion of users balancing value and risk.

Concept of privacy is dependent on cultures too and there is no coherent view over personal privacy globally. One personal information which may be acceptable in one culture, may be despised in another (Fife & Orjuela, 2012). Online social networks have been entrenched in social lives which persuades users for self-disclosure despite their privacy concerns (Blank et al., 2014); the desire of being part of a community bumps with the calculated risk of data misuse. Individual decisions about information sharing are heavily influenced by contextual factors, which underscores importance of social context and stresses that human behaviour is a significantly derived from unconscious motivation (Kokolakis, 2017).

Flender and Müller (2012) uniquely engaged quantum theory concepts to explain the privacy paradox. Human decision-making is considered similar to the measurement process in quantum experiments which incorporates perspective of indeterminacy. It proposes that decision making outcomes are affected by indeterminacy effect where preferences of individuals are decided at the time of decision but not prior to it. Bandara et al. (2020) explained privacy paradox as an outcome of a value-conflict based on Construal level theory of psychological distance. Privacy as a high-construal and psychologically-distant central value is undermined by low-construal, immediate, and proximal secondary value such as shopping gratification. Feasibility of proximal choices takes over the desirability of distant privacy protection psychologically. Users' superseding desire to install app diminishes their cognizance to permission requests and jargon-based permission requests are difficult for regular users to understand; one possible explanation is given by present bias theory, wherein people neglect future cost and prefer instant gratification (O'Donoghue & Rabin, 2015). Human decision making is not consistent and does not always seek utility maximization. Individual choices are shaped by their existent or non-existent knowledge and their

capacity or lack of it, to use the knowledge when it is needed, while coping with uncertainty and competing demands. Bounded rationality constrains human ability to obtain and utilize information (Simon, 2000). Taking cue from framework of contextual integrity, exploring role of contextualization holds much importance. Contextualization of privacy paradox implies that privacy concerns vary across individuals as well as circumstantial factors (Gu, Xu, Xu, Zhang, & Ling, 2017). Another interesting study by Dienlin and Trepte (2015) showed that using different research models and methodological approaches can lead to contradictory results and dissolve privacy paradox.

After going through key explanations, it is imperative to consider that digital environment has proliferated quickly. Smartphones are a companion now which break the time-space matrix, brings ubiquity, convenience, immediacy and continuity to user. Devices are evolving and so are the users. The pertinent question here to ask is, “*if the phenomenon of paradox is still the same*”? Interactive nature of smart objects and their ability “*to affect and be affected*” (Hoffman & Novak, 2018) has been overlooked in context of users. User experiences are formed through repeated interactions over time and each repeated interaction is different than previous one (Hoffman and Novak, 2018). This paper attempts to evaluate the privacy paradox by understanding the initial presumptions about it and if they still stand valid. With passing time and changing environment, some assumptions may lose their relevance to drive novel enquiries. Gadamer (2004) called them “*prejudices about the subject matter in question*”.

3. Contesting the paradox notion

Numerous explanations are being given to explain the “why” of paradox and this paper contests this notion using problematization as a methodology (Alvesson & Sandberg, 2011). Qualitative methods allows us “not only to describe events but to understand how and why the same events are often interpreted in a different, sometimes even conflicting manner, by different stakeholders” (Sofaer, 1999). Generally, research questions are generated by identifying or constructing gaps in existing knowledge, which is a dominant method in management. Though gap-spotting research is important to develop existing knowledge, many editors of reputed journals have vociferously raised issue of lack of research, which are consensus challenging and present new or alternate ways of thinking. Challenging assumptions may be risky and chances of publication are reduced (Starbuck, 2011). Gap spotting and problematization are not mutually exclusive but two distinct ways of asking questions. With this method, this paper embraces general meta-theoretical stance that all knowledge is uncertain (Kuhn, 2012) and problematization methodology is used here to ask question through a dialectical interrogation targeted for assumption challenging (Alvesson & Sandberg, 2011). Problematization is an “endeavour to know how and to what extent it might be possible to think differently, instead of what is already known” (Foucault, 1985). Problematization questions the presumptions which were used to develop the concept as knowledge production uses some assumptions as starting point. Problematizer not only need to question the assumption, but is required to provide an alternative viewpoint too. One methodological tactic to identify assumption is to view something negative or repressive as neutral. Andrews, Andrews, Luo, Fang,

and Ghose (2016) explored positive aspect of crowding wherein people turned inwards and immersed themselves in their mobile devices to avoid negative emotions like anxiety which resulted in increased response for mobile ads in crowded subway environment. Recognition of multiple values, interest and contradictions can be beneficial. To debunk the notion of paradox, it is imperative to grasp concept of privacy first.

Privacy is discussed in literature from various aspects. Privacy is rooted in fundamental characteristic of social life and social structure creates context. An information which is freely available in one social circle like family can be embarrassing as an employee. “*What is or should be private*” is purely contextual and one single standard cannot be applied to judge it (Blank et al., 2014). Privacy has been mainly viewed as a right, as a commodity, as control, and as limited access to one's information (Martin & Murphy, 2017). Individual privacy is reflective of specific needs and desires which constantly changes and is function of life situation based on family life, education, social class, and psychological makeup. Westin (1968) described four states of individual privacy; solitude, intimacy, anonymity, and reserve which also change constantly. Varying personal needs and choices make privacy a complex condition, and privacy can signify different things to different people and it extends beyond just data secrecy (Solove, 2020), (Westin, 2003). In online scenario, Personal data includes direct or indirect identifiable information of an individual like, IP addresses, digital fingerprinting, location data (Goddard, 2017).

Difference in stated and revealed preference of users led to coinage of the term privacy paradox, but is it really a paradox? Paradox as a noun can be understood as a situation “*having seemingly contradictory qualities or phases*” or “*an argument that apparently derives self-contradictory conclusions by valid deduction from acceptable premises*”(Merriam-Webster, 2021). Paradox represents interrelated but contradictory elements, which are logical in isolation but irrational when put together (Lewis, 2000). Theory of Constraints suggests that every business aspires to earn money, now and in future both, and anything that creates barrier or limits the performance of business to achieve that goal can be called a constraint (Gupta & Boyd, 2008). Privacy can be treated as an operational constraint towards hyper-personalization. To contest existing notion, understanding and asking questions about its assumptions is imperative. If researchers considered it to be a paradox, what assumptions did they make? Is that assumption still useful? This paradox continues similarly like expanding individual freedom, brings along dependencies with it (Wisman, 1995). This paper contests the notion that personal information “*should not to be shared*” as it is the “*right thing*” to do, is an ideological stance, which shows in stated preferences of users. It needs to be upgraded to, “*sharing what is needed*” is fine. This shift in stance is supported by arguing for decoupling of data usage concerns from data collection. Also, we elucidate that flawed constructs, privacy fatigue and a brief existence of learning paradox have contributed in creating a notion of paradox.

3.1. Decoupling data usage and data collection

The possible misuse of information is actually the fundamental threat to individual privacy rather than information collection. Consumers might share their information while having general concerns for privacy, but with expectations that information will be used within the norms of the context of exchange (Bandara et al., 2020). It indicates that people are fine with sharing data to enjoy personalization and better services, which should not be labelled as apathy towards privacy. Nissenbaum (2009) argued that only practices which support unbecoming flow of personal information, infringe user's perception of privacy. As one respondent in study of Rainie and Duggin (2016) puts it, "*The data isn't really the problem. It's who gets to see and use that data that creates problems*". The phrase which captured views best about privacy and personal information disclosure in their study is, "*It depends*". Polykalas and Prezerakos (2019) found that there is no correlation between amount of data access extent and number of app installations which indicates that data access is not a barrier for installation. Once user perceives benefits as adequate, relevant data collection or certain intrusiveness is taken as proper (Wottrich et al., 2018). Various studies support the notion that data collection is not the source of privacy concern but the usage is. Sutanto et al. (2013) proposed an IT solution to soothe privacy concerns and found that the users are fine with giving data and taking services but their concerns are about usage and sharing of their data. It is noteworthy that despite apprehensions and concern, users are giving data to use services, which indicates that benefits trump all apprehensions and it is re-iterated in many studies (Xu et al., 2011).

Privacy is not only about personal data protection; it is more about protecting users' autonomy, individuality, identity, ability to make mistakes without worry, with the assurance that their steps would not be followed and prevention from unpredictable negative consequences of those mistakes (Strycharz et al., 2019). As guided by Fair Information Practice Principles (Culnan & Armstrong, 1999), any information collector should inform users about the reason and subsequent management of collected information. Authority of an individual to decide what self-information should be known to others including the control of when such information will be acquired and how it will be used by others. Thus, decoupling data usage and data collection has to be done (Lee & Cranage, 2011) as users are concerns about the later only.

3.2. Flawed constructs and analysis-

Contextualism and behaviourism dominate the privacy research. Behavioural intentions are nothing but the resultant output of belief and action outcome evaluation (Ajnen, 1991) and contrary beliefs can co-exist. People who want to lose weight desperately become impulsive and eat cheese burger when it is presented to them. Exposure to tasty food increases cravings (Houben, Nederkoorn, & Jansen, 2012). They sure want to stick to diet, they can see cheese, read calorie label but still they eat it. Is it a cheese burger paradox? Or simply a case of preferred behaviour versus actual behaviour. Attitude and behaviour are fundamentally different, their difference cannot be termed as paradox. Behaviour implies risk decisions within specific contexts and is always contextual whereas attitudes are generic views about value which are beyond specific

contexts. So, the diversion in the attitude and behaviour about privacy is not a paradox (Solove, 2020). User make choice to achieve a certain goal and going through “*constructive consumer choice processes*”, it is found that, four significant goals are about maximum choice accuracy, minimum cognitive effort, minimum negative emotion, and maximum comfort in justifying the decision (Bettman, Luce, & Payne, 1998). As noted above, these goals find place in paradox explanations too. All the explanations of paradox are actually explaining the actual behaviour, stated behaviour can be more understood as an ideological stance or attitude of doing the “right thing”.

Moreover, privacy paradox studies are mostly based on surveys and experiments. Self-reported behaviour in surveys is inadequate to capture actual behaviour, and experiments lack in creating a genuine context of individual behaviour (Kokolakis, 2017). When privacy concerns are viewed as contextual, behaviour prediction becomes challenging (Aguirre et al., 2016). Inadequacies of study designs or different methodological approach can also be a crucial source behind mis-conceptualization of privacy behaviour as a paradox. Individuals may not behave the same as they would in normal contextual scenario, even though the experiment details given to them are false (Kokolakis, 2017). Using same sample and survey instrument, Dienlin and Trepte (2015) tested privacy paradox with two different methods. Their second approach dissolved the privacy paradox and established that contradictory results appear by using alternative methods of analysis and research models.

3.3. Briefly experienced learning paradox-

It is imperative to consider “*timing*”, as an assumption might be productive and inspiring sometime but may lose its sheen over time as a driver of rethinking (Alvesson & Sandberg, 2011). Times have changed in terms of indispensability of smart objects and relevant personalization. The emergence of consumer-object assemblages strongly indicates that smart objects play a role in consumption-related processes. Human-centric outlook may be limiting prospects of addressing important questions about the future of consumer behaviour (Hoffman & Novak, 2018). Smart objects’, especially smartphones’ anytime-anywhere feature is a big differentiator. The object-oriented anthropomorphism (Hoffman & Novak, 2018) has changed behaviour towards this ubiquitous and self-extension like object. Smartphones are not only the device to provide comfort but has become much more like extension of self (Melumad & Pham, 2020). The immersion in technology and benefits of it skew the cost benefit trade-off towards benefits. As McLuhan (1964) famously stated, “*Medium is the message*”. More than content, characteristics of the medium mould the behaviour. Smartphones have become indispensable and this indispensability stems from micro-level practices of daily routines which leads to ritualization of activities. If a product is very utilitarian and functional at one extreme or at the other extreme very symbolic with great personal significance, then it becomes indispensable (Hoffman, Novak, & Venkatesh, 2004). Smartphones are portable, provide psychological comfort, haptic pleasure, give sense of privacy and are highly personal. It reassures its presence in daily lives of consumers not only because of functionalities but due to unique combination of properties (Melumad & Pham, 2020). Agarwal & Karahanna (2000) defined cognitive absorption as “*a state of deep involvement with software*”

and smartphones fulfil all five dimensions of it; namely, temporal dissociation (no track of time), focused immersion (other attentional demands are neglected), heightened enjoyment (pleasant aspects), control (user's perception of being in charge), curiosity (aroused sensory and cognitive curiosity). Smartphones are moving from touch to a multisensory experience with augmented reality and virtual reality which results in better user experiences, visual and emotional appeal (Mishra, Shukla, Rana, & Dwivedi, 2021). Smart devices are evolving beyond simple data collection and supporting hyper-personalization. They are learning through the interaction with users and getting better at it with the help of artificial intelligence. The data from smart, connected products offers a sharper image about product usage or non-usage of features. Finer segmentations can be created by analysing usage patterns and better pricing strategies and value can be offered even to the individual user (Porter & Heppelmann, 2015).

Technology proliferation has been dramatic and rapid. Initially, it may cause learning paradox where old assumption or beliefs are not adjusted to new environments. In Cannon's words, "*Paradoxes emerge when beliefs or assumptions fail to keep up with external changes*" (Cannon, 1996). Actors may even neglect need of learning and use cognitive and behavioural frames to construct support for their view. Splitting as a strategy to resolve paradox further polarize conflicts due to artificial distinctions that mask similarities. Defensive behaviour towards this learning paradox might have initially to reduce the frustrations and discomfort of tensions, actors' defensive behaviours initially yielded positive outcomes but ultimately foster opposite effects which deepen the underlying tension (Lewis, 2000).

3.4. Case of privacy fatigue

Considering privacy, a commodity or placing monetary value on personal data is incapable and inaccurate as a metric to produce meaningful outcome, as it might reflect a risk assessment of personal data but not its value. When privacy is viewed as a right, as a commodity, and as limited or controlled information access, information sharing by individuals is assumed as relinquishing of expectation of privacy (Martin & Murphy, 2017).

People are not able to self- manage their privacy and if they choose to share personal data for any price, it is a reflection of their inability and resignation rather than of the value of the data (Solove, 2020). Explosion of privacy-invasive technologies have limited the ability of users to protect their information. Moreover, even after taking up this arduous task of privacy protection, it is not achievable. Privacy boundaries are repeatedly invaded and users perceive that they have lost authority over their information, then they give-up on protecting their privacy (Bandara et al., 2020). This state of resignation cannot be termed as apathy towards privacy concerns. Users have to cross the crucial stage while downloading any app which is accept permission request (Wottrich et al., 2018). Technical jargon of permission is hard to understand for users and they are more inclined to finish task; even if few users understand it, they are not aware about the consequences (Gu et al., 2017). Out of many business models like paid, freemium, in-app advertising models, completely free apps monetize user data by means of advertising or by selling non-personal data (Tang, 2019); and Yale Privacy Lab detected trackers in over 75% of android apps. Various data

like location, contact list, device content and personally identifiable information, like user names were tracked and shared with third parties (Sean & Kwet, 2017).

Tang, Akram, & Shi (2020) explores role of “*privacy fatigue*” while taking information sharing decisions. Privacy fatigue has two dimensions; powerlessness (emotional exhaustion) and numbness (cynicism) caused by privacy issues. Updating password, complex “*terms and conditions*”, Internet of Things (IoT) environment affect users and as a result, after reaching fatigue state, intention to protect privacy significantly declines. While using personalized offers, user makes a choice between personalization benefits and privacy risk (Pappas, 2018). Users show eagerness to install and ignore a pop-up from app; and are not aware of consequences of it (O’Donoghue & Rabin, 2015). Privacy fatigue signifies boredom and weariness and result in reluctance to actively manage and control personal information whereas cynicism describes state of frustration, hopelessness. Privacy concerns can prompt negative consumer actions like giving false information and spreading negative word-of-mouth. Advanced data collection methods are incomprehensible for users to perform correct cost-benefit analysis and covert information collection complicates it further. Due to privacy fatigue, the split between actual and preferred behaviour might have widened even more to support pseudo paradox notion.

4. Personalization-Privacy Assemblage

4.1. Understanding Assemblage

Assemblage is a “*gathering of heterogeneous elements consistently drawn together as an identifiable terrain of action and debate*” (Li, 2007). Deleuze and Guattari originally used French word “*agencement*” which is translated in English as “*assemblage*”. These words have different etymological roots. An assemblage is a collection of things into unities whereas an agencement is a layout of heterogenous forces or elements (Nail, 2017), (DeLanda, 2015). As an assemblage is created, at the core of it, agencement lies. An assemblage is comprised of heterogeneous elements or forces, often considered disparate or separate whose concord comes purely from the fact that they work towards or in same environment to bring something in being which may be a policy or a resultant force (Feely, 2020), (Baker & McGuirk, 2017).

An assemblage claims a territory which is attained through ongoing processes of stabilization and destabilization (Wise, 2018). It emphasizes on active connection, combination and alignment of relations between heterogeneous element. Thus, assemblage thinking is popular and has been applied to fields as diverse as public participation, urban development practices, industrial production. Roy (2012) observed that “*the analytics of assemblage has come to pose important methodological questions for the social sciences*” and stressed that an assemblage explain the existence and relation of things. Assemblage methodologies are guided by epistemological commitments which denote an interrogative orientation (Baker & McGuirk, 2017).

4.2. Creating framework

An assemblage is always in a fitting process and analysis of an assemblage entails investigating how elements are doing it (Youdell, 2010). Context-rich descriptions of elements are required (Davies & Riach, 2018) to form assemblage. This methodological-analytical approach follows a three-stage process to answer this question (Feely, 2020). Firstly, identifying the disparate components or forces which create the phenomenon. Personalization and privacy, as concrete elements, are present in an environment, where multiple social, legal, political, and business factors influence them. They need to be viewed together and not in silos to understand the resultant. Secondly, assemblages are made of and impact flows of various orders. They have an operational logic that can be mapped (Baker & McGuirk, 2017).

These elements are coded according to their usage in assemblage, i.e., as per the conditions and requirements, they can change their limits. For example, Deleuze and Guattari showed that “*the house is segmented according to its rooms’ assigned purposes, streets, according to the order of the city; the factory, according to the nature of the work and operations performed in it*” (Deleuze & Guattari, 1995). Territorial assemblages operate itinerantly, change happens progressively, one concrete point at a time (Nail, 2017). Further, a “*Binary Territorial Assemblage*” is created as it suits the nature of elements and their resultant balancing force which influences decision outcome.

In this binary, elements cannot be studied independently as they form an organic mechanism. This assemblage fulfils all three conditions of elements to form an assemblage, namely; conditional context, concrete elements and their connection. Utility of using digital platform is the connecting point of both elements. The concept is nested and interrelated with other issues which make its environment (e.g. social, legal, regulatory, digital environment) and are important to investigate the meaning arising from these relations (Kitchin, Lauriault, & Wilson, 2017). Changes in environment pave way for change within the assemblage, but ultimately destabilization is followed by stabilization and assemblage is retained. These elements are advantaged or disadvantaged by particular contexts and it re-emphasizes importance of context. Identification of disparate elements, establishment of process flow, recognition of forces from element to maintain assemblage, and uncertainties of destabilization are four epistemological commitments (Baker & McGuirk, 2017), which are followed in constructing this assemblage.

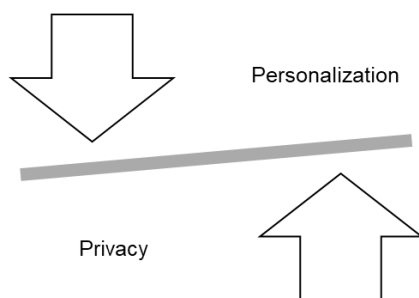


Figure 1. Personalization-privacy assemblage

5. Discussion

Creating something new is possible on either white canvas or after scraping the used one to remove existing accumulated layers. It is similar in case of concepts, where accumulated layers of cliché have to be scraped to pave way for novel enquiries. Changes in users' perspective with time and indispensability of smart objects have to be considered. The notion of personal information "*is not to be shared*", is an ideological stance. It is an accepted or "*correct thing to do*" but actual behaviour varies from it and falsely termed as paradox. As this term was coined, numerous explanations were offered which actually explained actual behaviour. This notion is contested based on the change of time, impact of methodologies and analytical approaches, privacy fatigue and the possibility of it briefly being a learning paradox due to quick proliferation of technology. The endeavour to contribute novel perspective towards the treatment of personalization-privacy relationship flourished in presenting this relationship as an assemblage, using problematization as a method. This paper tries to answer the question, if challenging this assumption is useful? Certainly yes. It is an endeavour to think differently than what is already known. It is essential to rethink and challenge fundamental assumptions to pave way towards more interesting and influential theories (Alvesson & Sandberg, 2011). Further, as users move towards hyper-personalization and smart connected world, information disclosures must be embraced as a process. An assemblage is an organic mechanism, which keeps changing as per environmental influences, i.e., stabilization and destabilization of elements are the continuous processes. Resultant impact of forces is understood better in an assemblage as it takes repeated interactions and its influence in account.

This assemblage underlines the organic interactions and affects, these elements have on each other, as every interaction is evolving and different than previous one. It is advocated not to view them as isolated elements. The assemblage highlights those negative consequences of personalization are nothing but misuse of data. Data collection as a process is simultaneously influenced by elements of assemblage. This data is used for personalization and results in better products or services. Same data can be misused and may result in discriminant pricing or fraudulent behaviours like identity theft and money frauds. Guns, processed food, cigarettes and numerous things were made for varied reasons like security, satiety, convenience and pleasure, yet there exist unintended consequences like murder, obesity and cancer. The unintended consequences totally depend on the usage. Many things which are started with good intention, turn ugly without proper handling. Technologies like augmented reality, virtual reality, internet of things would soon become widespread and if that many things will associate with smartphones, personal information collection would be a need and norm. All it requires is, judicious handling of data.

If firms would decide everything, from data collection to storage, to usage; they would use it in every possible way to maximize profits. It makes a strong case for privacy regulations as they exist in other business areas of food safety, drug, industrial waste and so on. General Data Protection Regulation (GDPR) for European Union (General Data Protection Regulation, 2016) is a step in right direction (Goddard, 2017) and should be followed worldwide. As the regulations

and policies are available for guidance, solutions will be worked on like Truong, Sun, Lee, & Guo (2020) presents blockchain based solution for personal data management. Generally, firms opposed complete privacy regulation, with the view of it being a needless interference (Westin, 2003), but with changing times, business leaders are advocating privacy as a human right too. One core thing about privacy debate is data usage and right over it. Though it may not be absolute, it would be bound by some conditions. Even the law of self-defence, which is natural and absolute (Ashworth, 1975) is bound by principles like reasonable avoidance of conflict or withdrawing from place or situation. People are sharing information with zeal. For example, a person declared on Facebook that he is out of city for a full week holiday and house is locked. A burglar liked his post and happily performed a burglary (Srinivas, 2018). This draws attention towards creation of responsibilities and awareness in data sharing too. Common sense should prevail as no law can substitute that.

An assemblage underscores need of regulation, decouples data usage from data collection, recognises presence of environmental influence. It is to be recognised that digital platforms proliferated quite quickly, to provide users with enriched experiences. Without proper regulations and guidance, data and privacy issues became awful. Similar to other fields, embracing issues as a part of business, a challenge, or an operational constraint, would augment the solution seeking. Debunking the privacy paradox might shift focus on data usage stream of research and evolution of different codes of usage and various territories may gather traction. Acceptance of data collection as norm would shift focus on sensitising, researching and regulating the usage of data.

6. Concluding Remarks

There are no predefined answers available, new questions offer starting points for new answers. This paper endeavoured to propose a fresh perspective by contesting 'privacy paradox' as popular notion and takes stance that data collection is the need, and privacy issues are nothing but business constraints. It is suggested to be neutral towards privacy issues. There are many aspects to an assemblage, which might have been left out. Future researchers can dive deep in details to envisage this relationship with more clarity. Emphasis on filling intention-action gap in privacy research is important for responsible technology development. Future research topics can include determining most direct environmental factors influencing the assemblage, providing better model, measuring the quantity of impact, examining the reasons about the stated privacy response, specifying stabilization and destabilization forces and case studies about.

References

- Agarwal, R., & Karahanna, E. (2000). Time flies when you're having fun: Cognitive absorption and beliefs about information technology usage. *MIS Quarterly: Management Information Systems*, 24(4), 665–694. <https://doi.org/10.2307/3250951>
- Aguirre, E., Roggeveen, A. L., Grewal, D., & Wetzels, M. (2016). The personalization-privacy paradox: implications for new media. *Journal of Consumer Marketing*, 33(2), 98–110. <https://doi.org/10.1108/JCM-06-2015-1458>

- Ajnen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Alvesson, M., & Sandberg, J. O. (2011). GENERATING RESEARCH QUESTIONS THROUGH PROBLEMATIZATION. *Academy of Management Review*, 36(2), 247–271. <https://doi.org/10.5465/amr.2009.0188>
- Andrews, M., Andrews, M., Luo, X., Fang, Z., & Ghose, A. (2016). Mobile ad effectiveness: Hyper-contextual targeting with crowdedness. *Marketing Science*, 35(2), 218–233. <https://doi.org/10.1287/mksc.2015.0905>
- Ariker, M., Heller, J., Diaz, A., & Perrey, J. (2015). How Marketers Can Personalize at Scale. *Hbr.Org*, 2–6. Retrieved from <https://hbr.org/2015/11/how-marketers-can-personalize-at-scale>
- Ashworth, A. J. (1975). Self-defence and the right to life. *The Cambridge Law Journal*, 34(2), 282–307. <https://doi.org/10.1017/S0008197300086128>
- Awad, N. F., & Krishnan, M. S. (2006). The personalization privacy paradox: An empirical evaluation of information transparency and the willingness to be profiled online for personalization. *MIS Quarterly: Management Information Systems*, 30(1), 13–28. <https://doi.org/10.2307/25148715>
- Baker, T., & McGuirk, P. (2017). Assemblage thinking as methodology: commitments and practices for critical policy research. *Territory, Politics, Governance*, 5(4), 425–442. <https://doi.org/10.1080/21622671.2016.1231631>
- Bandara, R., Fernando, M., & Akter, S. (2020). Explicating the privacy paradox: A qualitative inquiry of online shopping consumers. *Journal of Retailing and Consumer Services*, 52. <https://doi.org/10.1016/j.jretconser.2019.101947>
- Barnes, S. B. (2006). A privacy paradox: Social networking in the United States. *First Monday*, 11(9), 5. <https://doi.org/10.5210/fm.v11i9.1394>
- Beam, H. H. (1994). The Age of Paradox. *Academy of Management Perspectives*, 8(2), 94–96. <https://doi.org/10.5465/ame.1994.9503101152>
- Bettman, J. R., Luce, M. F., & Payne, J. W. (1998). Constructive consumer choice processes. *Journal of Consumer Research*, 25(3), 187–217. <https://doi.org/10.1086/209535>
- Blank, G., Bolsover, G., & Dubois, E. (2014). A New Privacy Paradox: Young People and Privacy on Social Network Sites. *Proceedings of the Annual Meeting of the American Sociological Association*. <https://doi.org/10.2139/ssrn.2479938>
- Buchanan, I. (2021). *Assemblage Theory and Method*. *Assemblage Theory and Method*. <https://doi.org/10.5040/9781350015579>
- Cannon, T. (1996). *Welcome to the Revolution: Managing Paradox in the 21st Century*. Retrieved

from

https://research.usc.edu.au/discovery/fulldisplay/alma993665902621/61USC_INST:ResearchRepository

Culnan, M. J., & Armstrong, P. K. (1999). Information Privacy Concerns, Procedural Fairness, and Impersonal Trust: An Empirical Investigation. *Organization Science*, 10(1), 104–115. <https://doi.org/10.1287/orsc.10.1.104>

Davies, O., & Riach, K. (2018). Sociomateriality and Qualitative Research: Method, Matter and Meaning In: The SAGE Handbook of Qualitative Business and Management Research Methods: Methods and Challenges Sociomateriality and Qualitative Research: Method, Matter and Meaning. <https://doi.org/10.4135/9781526430236>

DeLanda, M. (2015). *Assemblage Theory*. Edinburgh university press. Retrieved from https://edinburghuniversitypress.com/pub/media/wysiwyg/pdfs/samples/DeLanda-Assemblage_Theory-Introduction.pdf

Deleuze, G., & Guattari, F. (1995). A Thousand Plateaus. *SubStance*, 20(1), 117. <https://doi.org/10.2307/3684887>

Dienlin, T., & Trepte, S. (2015). Is the privacy paradox a relic of the past? An in-depth analysis of privacy attitudes and privacy behaviors. *European Journal of Social Psychology*, 45(3), 285–297. <https://doi.org/10.1002/ejsp.2049>

Dinev, T., & Hart, P. (2006). An extended privacy calculus model for e-commerce transactions. *Information Systems Research*, 17(1), 61–80. <https://doi.org/10.1287/isre.1060.0080>

Euromonitor. (2019). Top 10 Global Consumer Trends For 2019. *Euromonitor International*, (March). Retrieved from <http://www.portal.euromonitor.com/portal/analysis/tab>

Feely, M. (2020). Assemblage analysis: an experimental new-materialist method for analysing narrative data. *Qualitative Research*, 20(2), 174–193. <https://doi.org/10.1177/1468794119830641>

Fife, E., & Orjuela, J. (2012). The privacy calculus: Mobile apps and user perceptions of privacy and security. *International Journal of Engineering Business Management*, 4(1), 1–10. <https://doi.org/10.5772/51645>

Flender, C., & Müller, G. (2012). Type indeterminacy in privacy decisions: The privacy paradox revisited. In *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* (Vol. 7620 LNCS, pp. 148–159). https://doi.org/10.1007/978-3-642-35659-9_14

Foucault, M. (1985). The use of pleasure. In *New York* (Vol. 2). Retrieved from <http://books.google.com/books?id=rKy9QgAACAAJ&pgis=1>

Gadamer, H.-G. (2004). *Truth and Method*. Bloomsbury Publishing USA. Bloomsbury Publishing USA. <https://doi.org/10.5840/philstudies19762551>

- General Data Protection Regulation. (2016). General Data Protection Regulation (GDPR) – Official Legal Text. Retrieved February 25, 2021, from <https://gdpr-info.eu/>
- Goddard, M. (2017). The EU General Data Protection Regulation (GDPR): European regulation that has a global impact. *International Journal of Market Research*, 59(6). <https://doi.org/10.2501/IJMR-2017-050>
- Gu, J., Xu, Y. (Calvin), Xu, H., Zhang, C., & Ling, H. (2017). Privacy concerns for mobile app download: An elaboration likelihood model perspective. *Decision Support Systems*, 94, 19–28. <https://doi.org/10.1016/j.dss.2016.10.002>
- Gupta, M. C., & Boyd, L. H. (2008). Theory of constraints: a theory for operations management. *International Journal of Operations & Production Management*, 28(10), 991–1012. <https://doi.org/10.1108/01443570810903122>
- Hoffman, D. L., & Novak, T. P. (2018). Consumer and object experience in the internet of things: An assemblage theory approach. *Journal of Consumer Research*, 44(6), 1178–1204. <https://doi.org/10.1093/jcr/ucx105>
- Hoffman, D. L., Novak, T. P., & Venkatesh, A. (2004). Has the Internet become indispensable? *Communications of the ACM*, 47(7), 37–42. <https://doi.org/10.1145/1005817.1005818>
- Houben, K., Nederkoorn, C., & Jansen, A. (2012). Too tempting to resist? Past success at weight control rather than dietary restraint determines exposure-induced disinhibited eating. *Appetite*, 59(2), 550–555. <https://doi.org/10.1016/j.appet.2012.07.004>
- Iyengar, S. S., & Lepper, M. R. (2000). When Choice is Demotivating: Can One Desire Too Much of a Good Thing? *Journal of Personality and Social Psychology*, 79(6), 995–1006. <https://doi.org/10.1037/0022-3514.79.6.995>
- Kahneman, D. (2003). A Perspective on Judgment and Choice Mapping Bounded Rationality. <https://doi.org/10.1037/0003-066X.58.9.697>
- Kitchin, R., Lauriault, T. P., & Wilson, M. W. (2017). *Understanding Spatial Media*. *Understanding Spatial Media*. <https://doi.org/10.4135/9781526425850>
- Knijnenburg, B., Raybourn, E., Cherry, D., Wilkinson, D., Sivakumar, S., & Sloan, H. (2018). Death to the Privacy Calculus? *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2923806>
- Kokolakis, S. (2017). Privacy attitudes and privacy behaviour: A review of current research on the privacy paradox phenomenon. *Computers and Security*, 64, 122–134. <https://doi.org/10.1016/j.cose.2015.07.002>
- Kuhn, T. S. (2012). *The Structure of Scientific Revolutions*. University of Chicago press.
- Lee, C. H., & Cranage, D. A. (2011). Personalisation-privacy paradox: The effects of personalisation and privacy assurance on customer responses to travel Web sites. *Tourism*

- Management*, 32(5), 987–994. <https://doi.org/10.1016/j.tourman.2010.08.011>
- Lewis, M. W. (2000). Exploring paradox: Toward a more comprehensive guide. *Academy of Management Review*, 25(4), 760–776. <https://doi.org/10.5465/AMR.2000.3707712>
- Li, T. M. (2007). Practices of assemblage and community forest management. *Economy and Society*, 36(2), 263–293. <https://doi.org/10.1080/03085140701254308>
- Martin, K. D., & Murphy, P. E. (2017). The role of data privacy in marketing. *Journal of the Academy of Marketing Science*, 45(2), 135–155. <https://doi.org/10.1007/s11747-016-0495-4>
- McLuhan, M. (1964). Understanding media: The extensions of man. *MIT Press*. <https://doi.org/10.1016/j.plrev.2011.10.017>
- Melumad, S., & Pham, M. T. (2020). The Smartphone as a Pacifying Technology. *Journal of Consumer Research*, 47(2), 237–255. <https://doi.org/10.1093/jcr/ucaa005>
- Merriam-Webster. (2021). Paradox | Definition of Paradox by Merriam-Webster. Retrieved January 21, 2021, from <https://www.merriam-webster.com/dictionary/paradox>
- Mishra, A., Shukla, A., Rana, N. P., & Dwivedi, Y. K. (2021). From “touch” to a “multisensory” experience: The impact of technology interface and product type on consumer responses. *Psychology & Marketing*, 38(3), 385–396. <https://doi.org/10.1002/mar.21436>
- Nadella, S. (2019). Privacy is a human right, we need a GDPR for the world: Microsoft CEO. In *World Economic Forum*. Retrieved from <https://www.weforum.org/agenda/2019/01/privacy-is-a-human-right-we-need-a-gdpr-for-the-world-microsoft-ceo/>
- Nail, T. (2017). What is an Assemblage? *SubStance*, 46(1), 21–37. Retrieved from <https://muse.jhu.edu/article/650026>
- Nissenbaum, H. (2009). Privacy in Context: Technology, Policy, and the Integrity of Social Life. In *Privacy in context: Technology, policy, and the integrity of social life*. <https://doi.org/10.1080/15536548.2011.10855919>
- Norberg, P. A., Horne, D. R., & Horne, D. A. (2007). The privacy paradox: Personal information disclosure intentions versus behaviors. *Journal of Consumer Affairs*, 41(1), 100–126. <https://doi.org/10.1111/j.1745-6606.2006.00070.x>
- O’Donoghue, T., & Rabin, M. (2015). Present bias: Lessons learned and to be learned. In *American Economic Review* (Vol. 105, pp. 273–279). American Economic Association. <https://doi.org/10.1257/aer.p20151085>
- Pappas, I. O. (2018). User experience in personalized online shopping: a fuzzy-set analysis. *European Journal of Marketing*, 52(7–8), 1679–1703. <https://doi.org/10.1108/EJM-10-2017-0707>
- Polykalas, S. E., & Prezerakos, G. N. (2019). When the mobile app is free, the product is your

personal data. *Digital Policy, Regulation and Governance*, 21(2), 89–101. <https://doi.org/10.1108/DPRG-11-2018-0068>

Porter, M. E., & Heppelmann, J. E. (2015). How Smart, Connected Products Are Transforming Companies. *Harvard Business Review*.

Rainie, L., & Duggin, M. (2016). Privacy and Information Sharing. *Pew Research Center Internet Project*, 15(December 2015), 47. Retrieved from <http://www.pewinternet.org/2016/01/14/privacy-and-information-sharing/>

Roy, A. (2012). Ethnographic circulations: Space-time relations in the worlds of poverty management. *Environment and Planning A*, 44(1), 31–41. <https://doi.org/10.1068/a44180>

Sean, O., & Kwet, M. (2017). Mobile Trackers | Yale Privacy Lab. Retrieved July 17, 2020, from <https://privacylab.yale.edu/trackers.html>

Simon, H. A. (2000). Bounded rationality in social science: Today and tomorrow. *Mind & Society*, 1(1), 25–39. <https://doi.org/10.1007/bf02512227>

Sofaer, S. (1999). Qualitative methods: what are they and why use them? *Health Services Research*, 34(5 Pt 2), 1101–1118. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/10591275> <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC1089055>

Solove, D. J. (2020). The Myth of the Privacy Paradox. *George Washington Law Review*, 89(1), 50. <https://doi.org/10.2139/ssrn.3536265>

Srinivas, M. (2018). Burglar in Hyderabad likes FB posts on vacation plans, then strikes. Retrieved February 9, 2021, from <https://telanganatoday.com/burglar-likes-fb-posts-on-vacation-plans-then-strikes>

Starbuck, W. H. (2011). *The Production of Knowledge: The Challenge of Social Science Research*. *The Production of Knowledge: The Challenge of Social Science Research* (Vol. 173). <https://doi.org/10.1093/acprof:oso/9780199288533.001.0001>

Strycharz, J., van Noort, G., Helberger, N., & Smit, E. (2019). Contrasting perspectives – practitioner’s viewpoint on personalised marketing communication. *European Journal of Marketing*, 53(4), 635–660. <https://doi.org/10.1108/EJM-11-2017-0896>

Sundar, S. S., & Marathe, S. S. (2010). Personalization versus customization: The importance of agency, privacy, and power usage. *Human Communication Research*, 36(3), 298–322. <https://doi.org/10.1111/j.1468-2958.2010.01377.x>

Sutanto, J., Palme, E., Tan, C. H., & Phang, C. W. (2013). Addressing the personalization-privacy paradox: An empirical assessment from a field experiment on smartphone users. *MIS Quarterly: Management Information Systems*, 37(4), 1141–1164. <https://doi.org/10.25300/MISQ/2013/37.4.07>

- Tang, A. K. Y. (2019). A systematic literature review and analysis on mobile apps in m-commerce: Implications for future research. *Electronic Commerce Research and Applications*, 37(February), 100885. <https://doi.org/10.1016/j.elerap.2019.100885>
- Tang, J., Akram, U., & Shi, W. (2020). Why people need privacy? The role of privacy fatigue in app users' intention to disclose privacy: based on personality traits. *Journal of Enterprise Information Management*. <https://doi.org/10.1108/JEIM-03-2020-0088>
- Truong, N. B., Sun, K., Lee, G. M., & Guo, Y. (2020). GDPR-Compliant Personal Data Management: A Blockchain-Based Solution. *IEEE Transactions on Information Forensics and Security*, 15, 1746–1761. <https://doi.org/10.1109/TIFS.2019.2948287>
- Westin, A. F. (1968). Privacy And Freedom. *Washington and Lee Law Review*, 166.
- Westin, A. F. (2003). Social and political dimensions of privacy. *Journal of Social Issues*, 59(2), 431–453. <https://doi.org/10.1111/1540-4560.00072>
- Wise, J. M. (2018). Gilles Deleuze and Communication Studies. In *Oxford Research Encyclopedia of Communication*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228613.013.79>
- Wisman, J. D. (1995). The Cost of Living: How Market Freedom Erodes the Best Things in Life. *Political Science Quarterly*, 110(3), 494. <https://doi.org/10.2307/2152601>
- Wottrich, V. M., van Reijmersdal, E. A., & Smit, E. G. (2018). The privacy trade-off for mobile app downloads: The roles of app value, intrusiveness, and privacy concerns. *Decision Support System*, 106, 44–52. <https://doi.org/10.1016/j.dss.2017.12.003>
- Xu, H., Luo, X., Carroll, J. M., & Rosson, M. B. (2011). The personalization privacy paradox: An exploratory study of decision making process for location-aware marketing. *Decision Support Systems*, 51(1), 42–52. <https://doi.org/10.1016/j.dss.2010.11.017>
- Youdell, D. (2010). *School trouble: Identity, power and politics in education*. *School Trouble: Identity, Power and Politics in Education*. <https://doi.org/10.4324/9780203839379>

An Overview of Indian MOOCs

Ms. Richa Sharma

Ph.D. Research Scholar,
Symbiosis Center for Research and Innovation, Pune,
Symbiosis International (Deemed University)
richshar1405@gmail.com

Dr. Sharmiladevi J.C

Assistant Professor
Symbiosis Centre for Management Studies
Symbiosis International (Deemed University)

Abstract

The Indian education system recently went through a massive and eye-opening change. Our limiting factor, amongst many others, was the lack of adequate physical infrastructure for higher education institutes, resulting in lower enrolments throughout different courses. Though students have always had access to “Massive Open Online Course” (MOOC) platforms for learning, its potential has recently come to light. Moreover, recently, the recommendations of the New Education Policy (NEP) Committee members highlighted the critical role of the “Online Learning” mode in achieving the targets of Sustainable Development Goal 04 (Quality Education). The researchers thus wished to explore India’s readiness to harness and make the most of this platform. This paper aims to explore and compare the significant MOOC platforms used to offer courses in India and the various challenges they face. An in-depth analysis of the four most widely used and developed MOOC Platforms is studied to achieve these objectives. They are NPTEL (2003), mooKIT (2014), IITBombayX (2016), and SWAYAM (2016). The researchers evaluated that a few primary concerns regarding the performance of MOOCs in India include lack of digital infrastructure, need for investment, and adaptability of MOOCs by the learners. It was also realized that there could be a potential compromise in the quality of research work undertaken, the need to enhance the quality of content created and cater to the diversified needs of the Indian students.

Key Words: NPTEL, SWAYAM, IITBX, mooKIT, Massive Open Online Course, Online Learning

I. Introduction

Education is the discipline concerned with the acquisition of knowledge, skills, values, and beliefs. Formal education is composed of stages, including pre-school, primary school, secondary school, and university - the combination of these stages is referred to as the education sector (Marrou, 2021). Education is an integral element of society, given its nature as a merit good. This means that the consumption of a "unit" of education by a student is likely to benefit the student and reap positive, quantifiable external effects in the long run.

The enrollment in "Massive Open Online Course" (MOOC) has increased manifolds recently. The first-ever publication on MOOC was in the year 2009, featured in the journal "International Review of Research in the Open and Distance Learning," titled "The Technological Dimension of Massive Open Online Courses: The Case of the CCK08 Course Tools", by Antonio Fini. However, the concept only gained popularity in October 2011, when one Stanford professor started offering 03 courses for free in the public domain. It saw more than 100,000 registrations, further influencing launching several more such courses worldwide. The potential of these courses to reach the masses earned it the name of 'MOOCs.' Almost after a decade of being in vogue, 220 million-plus students have registered for at least one course on at least one MOOC platform offering them, of which 40 million registrations happened in 2021. This surge in enrollment during 2020-21 mainly resulted from the pandemic, rise in unemployment, and travel restrictions. Nevertheless, the year is termed the "Year of the MOOC." The size and scope of the courses and the platform(s) are still expanding. The USA has been the global leader in growth in enrolments since the conception of MOOCs. However, India is catching up, and it recently became the second biggest nation to receive increased registrations, with as many as 8,83,400 (27%) registration on edX platforms, 15 Lakh on Coursera, and 1.12 Lakh (13%) on Udacity (Pandey, 2016) by 2016. This prompted the government to understand citizens' changing needs and requirements regarding education and improvement in skill sets. Thus several different platforms which specifically cater to these needs were launched in recent years, and the prominent ones include NPTEL, mooKIT, IITBX, and SWAYAM. For offering MOOC, interested institutions can go for 'self-hosted platforms' or use 'licensed platforms' like Coursera. Under the self-hosted platform, the developer can have the freedom to either develop their platform such as IIT Kanpur by creating 'mooKIT,' or use an open-source platform available already. The main objective of this paper is to understand these platforms' theoretical and technical backgrounds and their contribution to enhancing the standard of education.

ii. Growth potential of moocs

MOOC is, in essence, an asynchronous teaching and learning platform. The process essentially involves using "pre-recorded lectures, resource video materials, lecture notes, assignments, and quizzes" as content and self-assessment at regular intervals. Although, the learning takes place through a scheduled deadline for the completion of coursework, encouraging real-time and simultaneous participation of instructors and students, thus giving a classroom experience

(therefore synchronous). MOOCs enable the instructors to teach the students in rural areas via pre-recorded DVDs, Whatsapp messages, messaging services, and other mobile-based content. This allows quality and equitable access to education to more learners. They can lead to an improvement in the "Gross Enrollment Ratio" (GRE) too. These are publicly accessible – free of cost.

There are two distinct types of MOOCs available globally. Firstly, the ones emphasizing the "connectivist philosophy," and, secondly, resembling the traditional course type. Stephen Downes coined "cMOOC" and "xMOOC, to distinguish the two. cMOOCs follow the principle of "connectivist pedagogy," encouraging modifications in teaching materials with changing needs of the learners. Additionally, cMOOCs encourage learners and support to engage in collaborative dialogues and knowledge-building processes. The xMOOCs, however, still follow the traditional course format involving a specified and pre-determined syllabus of recorded lectures and self-assessment tests and assignments. The instructor takes the lead role in such a setting, and students' contribution is limited to seeking advice and guidance.

Several suggestions under the New Education Policy (NEP) 2020 were given to improve the quality of education provided in nation's the higher education institutes (HEIs). Few necessary measures include establishing the "Academic Bank of Credit" (ABC), which would enable digital storage of the academic credits earned from various registered and recognized MOOCs and institutes, later to be considered while awarding any degree. It also aims to increase the "Gross Enrolment Ratio" from 26.3% (2018) in HEIs, including vocational education to 50% by 2035. A dedicated unit to develop digital content, digital infrastructure, and capacity improvement will be established under the Ministry of Education's (MoE) mentorship to look after the online learning needs of both primary and HEIs. The policy aims to achieve 100% youth and adult literacy by 2030. As the committee report, "IT be taken up for teacher training, adult literacy, remedial education and as a learning tool in higher education. This would also include developing online skill-based courses."* Thus, bringing it under the purview of digital learning. This paper wishes to understand how to incorporate MOOCs in achieving the same.

The key objectives of Sustainable Development Goal Number 04 (SDG 4) also make it imperative to study the readiness of our digital infrastructure to enhance the quality of education. To enable member nations to achieve the motto, "*Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.*" The important ones highlighting the HEIs and to be met by 2030 are target Target 4.3 ensures equal and gender bias-free access to affordable and quality technical, vocational and tertiary education, including university, target 4.4 focuses on substantially increasing the number of youth and adults with relevant technical and vocational skills for employment, decent jobs, and entrepreneurship goals, target 4.6 ensuring inclusive development of numeracy and literacy skills for youth, and target 4.7, provides acquiring knowledge and skills to promote sustainable development in all forms. This paper wishes to understand how to incorporate MOOCs in achieving the same. Objectives of this paper includes

1. To focus on exploring and comparing the significant MOOC platforms used to offer courses in India.

2. Understanding the various challenges faced by the MOOC platforms in India

iii. Mooc platforms in india

1. National Programme on Technology Enhanced Learning (NPTEL)- 2003

NPTEL is a collaborative venture of IISc (Bengaluru) and IITs (Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati, and Roorkee), launched in 2003, fully funded by the Ministry of Education (MoE), Government of India. This project aims to enable access to quality education to all corners of the country and offers close to 600+ courses for certification every semester in about 22 different disciplines. The development of NPTEL can be divided into different phases.

- Phase I (2003-2009): 235 visual content, comprising of videos, were developed and telecasted on <http://nptel.iitm.ac.in> (now non-operational).
- Phase II (2009-14): 600 video-based and web-based courses were prepared and recorded, compatible with indexing and keyword search. Also, a YouTube channel was initiated.
- Phase III (2014 onwards): An optional NPTEL Online Certification has been offered for a small fee of Rs 1,000 through a proctored-examination, which has seen over 1,00,000 registrations to date.

NPTEL takes advantage of the 'open-source technology' platform for running various courses. It is powered by "Google's open-source platform," named "Course- Builder." The courses are offered mainly in a visual format, where the lectures are recorded in a classroom structure, with occasional use of PowerPoint presentations to provide content. NPTEL has one of the largest online repositories in the world in basic sciences, engineering, selected arts and humanities, and management subjects. Its YouTube channel is one of the most subscribed educational channels, with over 130 crores views and 40+ lakh subscribers. The channel has visual content of more than 56,000 hours, transcribed and subtitled into English, of which 12000 hours of content is translated into Indian regional languages. It also has the "most accessed library" of peer-reviewed educational content globally.

The main objective behind offering certificate programs is to improve students' employability in the resource market or prepare them better to pursue a suitable higher education program. Typically, 04, 08, or 12-week online courses on various sciences and humanities topics relevant to the learners in higher education and introductory core courses are being offered. These are developed with appropriate tools and technologies to improve their significance. From March 2014 till Dec 2021, 3496 courses were completed, having more than 1.58 Crore enrollments, of which approximately 15.1 lakh students registered for examination to avail certificate of completion.

To further improve the enrolment of students in the courses, a new initiative of 'Local Chapters' in HEIs have been launched, named 'NPTEL-SWAYAM.' These chapters will be run by an instructor of the registered institute, who would act as a 'Single Point of Contact' (SPOC) agent. The SPOC will be kept in the loop with the latest NPTEL initiatives, further disseminating the information

amongst the students. SPOC must also arrange professionals for various courses and ensure that students benefit. SPOK will also be required to clarify learners' doubts if any.

NPTEL offers several other initiatives to promote inclusive learning, such as,

- 'Fee waiver support' for students coming from economically weak backgrounds.
- Multiple laboratory workshops are organized for the course toppers in person to give learners a hands-on experience.
- To improve students' employability skills and prepare them for industry jobs, internships for course toppers with course instructors.
- Employment Assessment and Training support and recruitment support such as interviews and business communication such as writing and speaking are provided.
- They also offer GATE Exam preparation; a portal gives free video content for learning and practice and previous year's question papers.
- NPTEL also sponsors the traveling cost and conference registration fees for SPOC agents from different 'Local Chapters'. Thus, helping them stay updated and informed of the latest trends, benefiting their students.

2. *mooKIT - 2014*

mooKIT is a 'lightweight' yet powerful MOOC management system conceived, developed, and designed at IIT Kanpur. The development aimed to reduce the existing complexities to host and manage open courses in developing nations with underdeveloped internet connectivity. So far, mooKIT has delivered approximately 60 courses in India and abroad. More than 200,000 learners from more than 90 countries across the world have registered in the various courses offered.

mooKIT received its initial funding from "TEQIP IITK", followed by "Commonwealth of Learning" by employing mooKIT in several courses offered worldwide through the initiatives of "MOOCs for Development", and "AgMOOCs." It was substantially funded by the 'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' (PMMMNMTT), Department of Higher Education, MoE. The major platforms used to host the MOOCs currently require the presence of advanced level technologies in the nation, which is generally missing in developing countries. mooKIT is ideally structured to resolve the problems of low-bandwidth and low-transmission capacity using the existing MOOC platform. It provides an indicator that highlights the current bandwidth of the connection. The learner can then modify the content streaming option, such as playing only audio or playing audio in sync with the PPT slides, giving a video-like experience. In case of even lower bandwidth, the learner can request a phone call on the mobile connection and listen to the audio content for learning. This feature benefits rural learners who do not have smartphones, laptops, internet connectivity, or high bandwidth. The only instrument required thus is a simple phone. mooKIT comes with the support of a high-tech analytics interface enabling instructors and learners to view their course activities and plan their studies accordingly. "Drupal" is the Content Management System (CMS) used to develop mooKIT. It offers four types of solutions based on the requirements of the institutions:

- **mooKIT Standard:** It streams only one course at a time that can do away with video streaming. However, YouTube content may be incorporated for accessing content.
- **mooKIT Enterprise:** It is suitable to run multiple online courses simultaneously. Learners are a part of a portal and enroll in the course(s) of their interest.
- **mooKIT Replicated:** It is aimed to provide quality content to areas with low bandwidth. It is done by caching the content on local servers. The servers are expected to sync regularly for upgradation.
- **mooKIT Personal:** This platform operates on devices with low-frequency and low storage capacity, such as cellular phones, resulting in the limited scope of social interactions.

3. *IITBombayX - 2014*

'IITBombayX' was developed and managed by IIT-Bombay, it operated on the "Open edX", an open-source platform, since 2014. It is a non-profit MOOC platform receiving funding from the "National Mission on Education-Information and Communication Technology" (NME-ICT), the "Ministry of Human Resource Development (MHRD), GoI. It offers 63 courses on multiple subjects covering major disciplines. It is dedicated to improving learners' educational options, both on-campus and off-campus. The platform also gathers data to understand the students' learning styles better. The Open-edX powers IITBX, which is a compact version of the official "edX platform" launched by Harvard University and MIT in 2013.

"IITBX" is based on the principle of the blended learning pedagogy that offers a combination of both offline classroom-like learning and online learning. This allows direct supervision during the classroom sessions and academic freedom due to the self-paced learning and assessment during the online sessions. However, course completion shall be compulsory to attain credits. This model is named "Blended Learning - MOOC Model of IIT Bombay (BLMM)." India's top institutes and universities offer MOOC courses to learners in the nation, mainly via this system.

IITBombayX offers 04 types of MOOCs depending on varying needs:

EduMOOCs: These target learners trying to widen their knowledge base in different disciplines. The MOOCs offered are vast extensions of the IIT Bombay courses. The quality of teaching is equivalent to that of classroom teaching.

SkillMOOCs: It aims to improve employability or enhance the present skills. The primary focus of these MOOCs is on career development by advancing in their career.

TeachMOOCs: The target audience is academicians and professionals in the teaching field looking to enhance their teaching skills. TeachMOOCs introduce them to various teaching pedagogies. These are primarily offered blended, accommodating online and offline sessions.

LifeMOOCs: These offer short-courses to pursue life-long learning by the working professionals and others desiring. These MOOCs can be used as a precursor to any other domain of MOOCs or benefit learners in improving their careers.

4. *Study Webs of Active–Learning for Young Aspiring Minds (SWAYAM)- 2016*

MOOC program initiated by the GoI, aimed to achieve the "three cardinal principles of Education Policy- access, equity, and quality." This effort seeks to make the best teaching-learning resources accessible to all, thus promoting inclusive and equitable educational growth. It, therefore, seeks to bridge the digital gap for disadvantaged students and allow them to learn and become employable. SWAYAM platform was initiated by the 'Ministry of Human Resources Development (MHRD) in collaboration with the 'All India Council for Technical Education (AICTE) in association with Microsoft was explicitly designed to improve the welfare of the working professionals, school and college dropouts, as well as students from rural background. The unique features of SWAYAM, rather its strength lies in its qualitative evaluation system, equity access, recognition of credits, and cheap costs. The initiation of SWAYAM took place in 2003 with the introduction of the NPTEL. The initial focus was on engineering, applied science, and arts and humanities discipline; in 2009, study material of all disciplines in the HEIs was incorporated under the National Mission of Education launch through ICT (NME-ICT).

The courses hosted on SWAYAM should follow the 04 quadrants, firstly, Video lecture, secondly, downloadable or printable specialized study material. Thirdly, self-assessment tests and quizzes; and lastly, providing an online discussion forum for doubt clearance. To ensure that the quality of contents produced and delivered is maintained, nine National Coordinators have been recognized for the task. They are listed below in table number 1.

Table 1

Sr. No.	Name of the Institute	Beneficiary
1	All India Council for Technical Education (AICTE)	Open for all Under-Graduate and Postgraduate Education
2	National Programme on Technology Enhanced Learning (NPTEL)	Engineering Students, Under-Graduate and Postgraduate Education
3	University Grants Commission (UGC)	Non-technical Postgraduate education
4	Consortium for Educational Communication (CEC)	Undergraduate education
5	National Council of Educational Research and Training (NCERT)	School education
6	National Institute of Open Schooling (NIOS)	School education

7	Indira Gandhi National Open University (IGNOU)	Out-of-school students
8	Indian Institute of Management, Bangalore (IIMB)	Management studies- Under-Graduate and Postgraduate Education
9	National Institute of Technical Teachers Training and Research (NITTTR)	Teacher Training program Out-of-School Education

Source: Authors Own

The courses on the platform are available for free of cost to the public domain and learners at large. To obtain a certificate for the enrolled course, the learners are expected to register for a proctored examination at a nominal cost. The eligibility criteria for the credential vary from course to course, and the same is announced on the course page in advance. The higher education institutes approving credit transfers from SWAYAM courses can demand the issued certificate to verify the grade obtained. UGC issued the 'Credit Framework' for online courses through 'SWAYAM Regulation 2016,' suggesting the Universities identify courses for credit transfer to the student's academic record for courses completed. Similarly, a gazette notification in 2016 was also released by AICTE for credit transferability.

Table 2: Pattern of Credit Transfer

Provider	Course Format	Learning Pedagogy	No. of Courses	No. of Users	Institutional Credits	Platform Language
NPTEL	Time-Bound	E-Learning	1210	15 Lakh	Partially	English
mooKIT	Time-Bound	E-Learning and Offline	12	1 Lakh	Partially	English, Hindi, Kannada, French, Russian, Ukrainian
IITBx	Time-Bound Self-Paced	E-Learning	63	12.5 Lakh	Partially	English
SWAYAM	Time-Bound Self-Paced	E-Learning and Offline	175	25 Lakh	Complete	English, Hindi

SWAYAM- NPTEL MOOCs superior to other e-learning portals such as edX and Coursera due to the following reasons:

- NPTEL is primarily based on the AICTE curriculum and aims to bring together the best content for the topics from various disciplines. Courses under NPTEL are offered by faculty from top-ranked institutions where active research work in their domains is undertaken.
- Indian instructors can understand the students' background and the Indian schooling system and modify or disseminate the content using different approaches. Examples from the Indian context are used, making the topic more relatable.
- Except for SWAYAM-NPTEL MOOCs, no other MOOC portals conduct a proctored examination to verify the student credentials. The exam has to be attended in person, in offline mode compulsorily. Online methods are not permitted. Making it, it's the best selling point. Courses offered on Udemy, Coursera, and other platforms often issue a 'Certificate of Completion' with zero academic contribution since the learning validity cannot be tested.
- The assignments offered on several MOOC portals often carry forward the same tasks for long durations, making it highly susceptible to easy manipulation by students in arriving at answers. The same is avoided in courses offered at the SWAYAM-NPTEL platform, as instructors are requested to prepare new assignments every semester. Also, the final exam question papers are designed with minimal repetition.
- The e-certificate has a QR code that can be scanned and verified from the NPTEL servers.
- NPTEL works closely with Indian colleges and universities through its Local Chapter program. There is an NPTEL coordinator in every local chapter college. This person has access to all information such as course-wise participant enrollment, exam registration details, hall tickets, final exam marks, and e-certificates - of learners who have declared as belonging to that college. These coordinators have direct access to support teams at NPTEL to resolve any issues concerning courses/exams. NPTEL works with the colleges closely, getting feedback and making changes to the learning process to make the MOOCs adoption more effective, ensuring maximum benefit for the learners.

Iv. Challenges for moocs in India

The primary issues regarding the performance of MOOCs in India are discussed in detail below. Few of them include lack of digital infrastructure, need for investment, adaptability of MOOCs by the learners, focus on enhancing the quality of content created for MOOCs, and catering to the diversified needs of the Indian students.

1. **Lack of digital infrastructure:** MOOC platforms require high-speed internet connections due to the high quality of content in their short-term courses. India, still a developing country, cannot provide easy access to computers. Moreover, the uninterrupted Internet facility and computer devices still come under luxurious items, thus confining their availability mainly to

urban localities. Similarly, the limited availability of essential infrastructure has resulted in the limited reach of MOOCs. Digital infrastructure needs to be further developed to provide nationwide connectivity.

2. **Need for Investment:** Development, management, and distribution of MOOC platforms require a colossal inflow of investments. The various costs incurred include hiring human resources, social overheads, content creation, etc. The exact needs to be met by further liberalizing the conventional restrictions and regulations. Public-Private Partnerships must also be encouraged for the design and maintenance of MOOCs.
3. **The adaptability of MOOCs by the learners:** The primary mode of communication between the instructor and learner is written. Thus, resulting in underdeveloped speaking skills amongst the learners, which will further require enrollment in a traditional course. MOOCs also don't offer any interaction between learners enrolled for the course, resulting in a feeling of isolation (Hoxby, 2014). The lack of social support has a significant effect on the learning and well-being of the learner (Tsai and Weng, 2015). Moreover, practical courses requiring offline training and hand-holding may not be suitable for online training. Adoption of technology itself can be a challenge experienced by the learners.
4. **Enhancing the quality of the content:** The most important stakeholder to improve the standard of MOOC courses is a highly skilled teacher/instructor. Along with inefficient, limited infrastructure to facilitate high-quality delivery of MOOCs, there is a shortage of full-time skilled teachers in the country. Several recommendations under the New Education Policy 2020 to correct these gaps are given. Such as adopting the credit transfer mechanism, promoting MOOCs, etc. It also emphasizes conducting teacher's training from time to time.
5. **Diversified Needs:** In a diverse and multicultural country like India, where several languages are spoken, courses only in one language can limit the potential of the courses. NEP focuses on vocational and technical training, which requires multilingual training and educational content. It doesn't mean we do away with English since it is a globally acceptable communication medium, but merely be more inclusive, keeping in mind the varied needs of the society. Although it was noticed while converting the content in regional languages, its uniformity and quality were compromised. Moreover, designing the course material, delivering it, and managing the MOOC platforms was a challenge in itself too.
6. **A possible tragedy of the commons:** For instance, learner X could not enroll in a course offered by IIT Bombay (IITB) but attempted all 30 MOOCs led by IITB Professors and earned credits equivalent to a degree program. On the other hand, another learner, Y, pays 1000 times more fees for similarly titled offline classes. What is the measure to test which mode of study is more beneficial? Will student X be as skillful as some learner Y who enrolled at IITB and obtained the certificates? If learner Y later cannot differentiate himself from student X, a tragedy of commons will occur where, moving forward, no learner will be willing to pay for the course anymore. Even if the institute argues that MOOC credits are inferior to classroom credits, the quality of content then becomes questionable.

7. **Quality of research compromised:** There is a direct correlation between teaching and research. The act of teaching in class, filled with spontaneous interactions and new methods for an explanation, can promote productivity in the research work. In MOOCs, such interactions are missing, adversely affecting the quality of teaching. However, discussions related to ongoing research work can also result in potential intellectual property losses. There are multiple opportunity costs here too. Planning, creating, editing, and managing MOOCs can be highly time-consuming, resulting in minimum contribution in the research field, thus reducing the growth potential and quality of the faculty and MOOC.
8. **The gender gap in enrollments:** It was observed that there exist gender disparities in the enrollment rate. The underrepresentation of women in the traditional courses, such as STEM discipline, is directly reflected in MOOCs offering similar subjects and titles. (Macleod et al., 2014) There is no recent study proving representation of women is better in the social sciences. Thus one can conclude that the gender gap exists even in 'online' learning. However, Bayeck (2016) indicates the enrolment rates of the women candidate improve when collaborative/group courses are offered.
9. The trend so far suggests that most learners enrolling in the MOOCs are either degree holders or pursuing one and are employed (Bayek, 2016). The year 2020 was an exception where unemployed enrollment improved due to massive firing, a repercussion of the economic shutdown.
10. Relies on Self-Motivation: The learners are expected to be self-motivating and self-directed, which is amongst the various factors affecting the acceptance and usage of MOOCs (Milligan et al., 2013). The success of MOOCs must also not be measured based on completion rates but on learning benefits. It is difficult to measure the same since most MOOCs' feedback rate is meager (Murugesan et al., 2017).

Thus, a complete restructuring of the E-learning/MOOC platform is required to match the changing needs and requirements of our student's present and future demands.

V. Conclusion

India is following the global trend of offering online courses via the MOOC platform, and statistics is performing an exceptional job. Various MOOC platforms, as discussed in the paper, are used to prove the courses. The MOOC platforms are relative 'in fact' though since their inception happened recently. Except for the NPTEL, many platforms are just between 1-5 years of age, with little to no concrete research work on these MOOCs are present. This paper's objective was to theoretically understand the same and understand the MOOCs' preparedness to handle the new 'online studying' trend. There's immense scope in further research in this field, such as understanding the current state of the popularity of these MOOCs amongst the learners and teachers alike. The readiness of digital infrastructure to disseminate the courses via MOOCs, the role of capital investment, the role played by Ed-Techs in enhancing the quality of MOOC content, etc., can also be assessed. A thorough comparative analysis of the mentioned factors can clarify the role of MOOCs moving forward.

VI. References

- Chatterjee, P., & Nath, A. (2014, Dec).** Massive open online courses (MOOCs) in education— A case study in Indian context and vision to ubiquitous learning. In MOOC, Innovation and Technology in Education (MITE), 2014 IEEE International Conference on (pp. 36-41). IEEE.
- Garg, D. (2017, Feb).** Major Challenges in the Online Higher Educational Environment. <http://blogs.timesofindia.indiatimes.com/breakingshackles/major-challenges-in-online-higher-educationalenvironment/>
- Insights. (2015).** Critically comment on the major challenges facing higher education in India and measures needed to overcome them. Economic Times, News Article. Accessed from: <http://www.insightsonindia.com/2015/08/11/5-criticallycomment-on-the-major-challenges-facing-highereducation-in-india-and-measures-needed-to-overcomethem/>
- Miller, A. (2017). Sites powered by Open edX, Accessed from: <https://github.com/edx/edx-platform/wiki/Sitespowered-by-Open-edX>
- Mukul, A. (2016, Jun 17).** Microsoft to design app for Indian govt's open online courses. Economic Times, News Article Accessed from: <http://tech.economictimes.indiatimes.com/news/internet/Microsoft-to-design-app-for-indian-govts-open-onlinecourses/52790346>
- mooKIT Official Website, accessed on 05/03/2022 <http://www.mookit.co/>
- NPTEL Official Website**, accessed on 04/03/2022 <https://nptel.ac.in/>
- Pandey, N. (2016, Jul 14).** Open online course providers upbeat as enrolments jump. <http://www.thehindubusinessline.com/news/education/open-online-course-providers-upbeat-as-enrolmentsjump/article8850328.ece>
- Shah, D. (2016, Dec 25).** By the Numbers: MOOCs in 2016, How has the MOOC space grown this year? Get the facts, figures, and pie charts, <https://www.classcentral.com/report/mooc-stats-2016/>
- Sethi, K. K., Bhanodia, P., Mishra, D. K., Badjatya, M., & Gujar, C. P. (2016).** Challenges Faced in Deployment of eLearning Models in India. In Proceedings of the International Congress on Information and Communication Technology (pp. 647-655). Springer Singapore. Swayam Central Official Website accessed on 05/03/2022 <https://swayam.gov.in/>
- Hoxby, C. M. (2014).** The economics of online postsecondary education: MOOCs, nonselective education, and highly selective education. *American Economic Review*, 104(5), 528-33.
- Bayeck, R. (2016).** Exploratory study of MOOC learners' demographics and motivation: The case of students involved in groups. *Open Praxis*, 8(3), 223-233. International Council for Open and Distance Education. Retrieved March 10, 2022, from <https://www.learntechlib.org/p/173534/>.
- Macleod, H., Haywood, J., Woodgate, A., & Alkhatnai, M. (2014).** Emerging patterns in MOOCs: Learners, course designs and directions. *TechTrends*, 59(1), 56–63. <http://dx.doi.org/10.1007/s11528-014-0821-y>
- Murugesan, R., Nobes, A., & Wild, J. (2017).** A MOOC approach for training researchers in developing countries. *Open Praxis*, 9(1), 45-57.
- *https://docs.google.com/document/d/1vIWEH7w_bwUxymA70Jc2y-EXO_BDD8IXI9cjS0UkxdQ/edit , Under 'ICT for Education', accessed on 05/03/2022

National Company Law Tribunal – The New Era of Corporate World

Dr. Sameera A Raees

Assistant Professor
Symbiosis Centre for Management Studies, Pune
Symbiosis International (Deemed University)
sameera.raees@scmspune.ac.in

Abstract

In current times, finding a particular court to subsume with the corporate cases turns to be the need of the public authority. With this philosophy, Central Government set up National Company Law Appellate Tribunal (NCLAT) and National Company Law Tribunal (NCLT) on first June 2016. Since its starting NCLT is working inside the positive bearings. This paper explores the job of National Company Law Tribunal under various laws, as this law offers incredible help to corporate field presently, judges who have aptitude in this field only will pass judgment on the cases and give equity. In the Indian Corporate Law History with the extensive impacts a similar act will be considered as a welcome step.

Keywords: - National Company Law Tribunal (NCLT), Company Law Board (CLB), Implementation

1. Introduction

Beginning around 1600 India had a broad series of Company Law, as The East India Company under the Royal Charter, the Joint Stock Company Act, 1857, Companies Act of 1866 followed by Indian Companies Act, 1913. Indian Companies Act, 1956 was supplanted by The Indian Companies Act, 1913 and saw different corrections inside the years to come. As of late in 2015, the Supreme Court announced legitimate the National Company Law Tribunal (NCLT) and National Company Law Appellate Tribunal (NCLAT). This statement closes in the making of the constitutionalized NCLT and NCLAT, by the Central Government on June first, 2016.

NCLT, National Company Law Tribunal, is a semi legal game plan to resolve common corporate questions. While, NCLAT is the Appellate Tribunal where requests from the Tribunal are managed. Article 245 of the Indian Constitution engages to build up NCLT and NCLAT. The council is the result of Eradi Committee under the Constitution and notices authority and power similar to a court. The organizations act, 2002 accommodates the setting up of a NCTL and NCLAT to trade the current Company Law Board (CLB) and furthermore the Board for Industrial and Financial Reconstruction (BIFR). A board was established to examine the current law about shutting records of partnerships to re-foster something similar to connect with the most recent turns of events and developments inside the organization law and administration and to suggest changes inside the method at various stages followed inside the indebtedness procedures of the organizations to stay away from pointless postponements on top of the worldwide practice see in this field. The setting up of the NCLT and NCLAT will clear the means for the speedier execution of the liquidation code. As detailed in the information referenced by, government records which uncovers that 48,418 common cases were forthcoming under the steady gaze of the Supreme Court as of mid-February 2016, 3.116 million common cases forthcoming under the watchful eye of the High Court as of December 31, 2014 and 8.234 million cases forthcoming before the area and subordinate courts. This paper consists of the establishment, need, roles and powers of the NCLT and the measures suggested for the efficient working of the tribunal.

Emergence of NCLT

Currently, arrangements with respect to examination of partnership's records, freezing of organization's property, class activity suits, transformation of a public organization into a private venture will be ruled through the NCLT, and charm subsequently would be before NCLAT instead of High Court. With the constitution of NCLT, powers of High Court under the Companies Act 2013/1956 connecting with decrease of extent capital, twisting up and think twice about plan (consolidation, demerger, and understanding) could get moved to NCLT underneath explicit headings gave by utilizing the MCA (Ministry of Corporate Affairs).

As per the notice on the webpage of the Department of Personnel and Training on March 30, 2016, previous adjudicator (Retd.) of the Supreme Court of India, Hon'ble Mr. Justice S.J. Mukhopadhyaya, became designated on the grounds that the director of the NCLAT, and the Appointments

Committee of the Cabinet acknowledged the arrangement of Justice (Retd.) M.M. Kumar, who go about as the President of National Company Law Tribunal (NCLT). With the attestation dated June 01, 2016, the Central Government comprised 11 (eleven) Benches of the NCLT in exercise of its powers underneath sub-stage (1) of area 419 of the new Companies Act, 2013. Of the supposed eleven seats, two will be arranged in New Delhi, and one each at Ahmedabad, Allahabad, Bengaluru, Chandigarh, Chennai, Guwahati, Hyderabad, Kolkata and Mumbai.

2. Literature Review

Parkinson, J. E. (Parkinson, 1995) in this acclaimed new work, the author argues that it should be the function of company law to promote the public interest. Examining a number of topical and controversial issues from that perspective, including the adequacy of corporate governance arrangements, the 'Nexus of Contracts' theory of the company, and the role of markets, the author explains why the theory of company law has to be understood in order for the day-to-day practice of company lawyers to be fully appreciated. The book explores in some depth the protection of interests largely ignored by company law, such as those of employees and the local community, and the safeguarding of the environment from corporate abuse.

Alice de Jonge (Jonge, 2011) this paper aims to highlight the disparity between the huge global influence and reach of transnational corporations, on the one hand, and the lack of international legal infrastructure for regulating TNC activity, on the other. Significant governance gaps in the existing institutional infrastructure were identified, creating a permissive environment within which blameworthy acts by TNCs may occur without adequate sanctioning or reparation. Potential regulatory and institutional avenues for filling these gaps were identified.

Deepa Govindarajan (Govindarajan, 2011) this paper examines various concepts related to the topic of corporate risk appetite. It emphasizes the need for consistency of definitions and coherence of terminology. Corporate risk appetite articulation is discussed as a corollary to strategy formulation and as an aid to corporate governance. The paper highlights the challenges that financial firms' boards have faced in expressing their risk appetite and in setting the approach to risk at board-level. The paper further stresses the need to assess risk holistically in risk appetite discussions. It introduces the Govindarajan - Andenæs model as a process template for systematically identifying and deploying risk appetite. The objective is to allow the risk appetite statement to be a practical tool that aids transparency in both risk-taking by firms and in the evaluation of their risk-based performance on an ongoing basis.

V S Kaveri (Kaveri, 2018) This article attempts to guide bankers to develop a fair understanding of the process of rehabilitation and winding up of sick companies under a new environment and offers suggestions for creating a conducive environment for revival of the industrial economy. **Karan Kamath** (Kamath, 2018) This article traces the journey of the constitution of the tribunals, examines the constitutionality of the provisions as they stand, and concludes by

suggesting certain modifications to the existing legislation. **Kanchan Yadav** (Kanchan Yadav, 2019) This paper helps to understand the various regulatory framework, interpretations, various steps involved and filing of forms in the process of corporate restructuring in India its implications and emerging issues in this area.

Dr. Jaswant Saini, Satish Kumar (Dr. Jaswant Saini, 2020) The Paper analyses the working of NCLT as debt recovery mechanism and overview on the impact of Insolvency and Bankruptcy Code, 2016 on NPA. The study is purely based on Secondary data collected from the official web portals of NCLT, RBI, IBBI and research articles of prominent research scholars. The study has found that a trend towards a little more improvement in the overall NPAs of banks can be seen.

Ram Singh, Hitesh Kumar Thakkar (Ram Singh, 2021) In this study, the author develops a model to examine the dynamics of the insolvency and bankruptcy code (IBC) processes in the aftermath of Covid-19. They use the model to study the impact of the pandemic on the following aspects of the financial disputes and their implications: number of disputes between debtors and their creditors in the aftermath of Covid-19; frequency of these disputes coming to the National Company Law Tribunal (NCLT); impact of the pandemic on the frequency of ‘out of court’ settlements; the nature of disputes settled amicably and those adjudicated under the corporate insolvency resolution process of the NCLT; and the recovery rates in the settled versus litigated disputes.

3. Objectives of the paper

1. To examine the role of NCLT & NCLAT in resolving corporate matters
2. To suggest how the working of NCLT and NCLAT be maximized
3. NCLT

The need for a serious council was brought by the Hon'ble Supreme Court of India in the judgment of S.P. Sampath Kumar v. Association of India, wherein Hon'ble court took on the chance institutional instrument standard and caught that because of autonomy as the number of inhabitants in India is generally developing which lead to development of debates under the steady gaze of the courts, resultant in trouble on courts to take in the subjects. Besides, the archive presented via Shah Committee, in connection of particular council said that there is a squeezing need to change the lawful rules as far as placing in of impartial court because of overabundances of cases under the watchful eye of the courts.

On first June 2016 Central Government told arrangements dealing with establishment of NCLT and NCLAT. Powers of Company Law Board had been moved to NCLT. Furthermore, Center has intended to embed second arrangement of notices through which the NCLT may be on an equivalent balance with High Courts and BIFR. Presently onwards NCLT has the abilities of the CLB and the recently embedded powers through the Act of 2013. Later the inclusion of NCLT tremendous change become apparent in the procedure and technique to manage the cases which

may be forthcoming u.S.434 before various discussions across the country. The warning of move of cases from CLB to NCLT become advised. On first June 2016, every one of the protests which were forthcoming before CLB were ignored to NCLT and the Tribunal will currently decide these sort of subjects as in accordance with the arrangements of guideline. NCLT has been conceded an optional solidarity to absorb the forthcoming instances of CLB from any level they need to.

Need from CLB to NCLT'S (Significance of NCLT over CLB)

The CLB changed into working with just 5 seats, the NCLT will initiate act with eleven seats. NCLT'S purview additionally solidifies the organization ward of CLB, Leading group of Industrial and Financial Reconstruction, Expert for Industrial and Financial Reconstruction (Appellate) and Ward and powers alluding to liquidation off, rebuilding and other such arrangements, at present vested inside the High Courts. Additionally, NCLT can utilize Amicus Curiae (a free counsel to an official courtroom in a specific case) for assessment on various particular authentic issues. Presently, different experts are likewise permitted to represent. As a result of the bound extension best Company Secretaries, Chartered Accountants, Cost Accountants might address their clients before the CLB. Presently different experts can likewise address their customers in subjects worried to consolidations/ending up before NCLT underneath the Draft Rules.

Through the creation of NCLT, investors and loan bosses would now be able to record class activity suits towards the organization for penetrating the arrangements of the Act. While investors have continually been permitted to challenge some unacceptable doings of the control, class movement suits make this a stride further. The accompanying elements can summarize the critical qualification among persecution, blunder (Sections 241-244) and refinement development suits (Section 245) Members notwithstanding store holders can likewise record an application instead of just part Under Section 245; notwithstanding association and its legal deputies, application can be documented against review firms and some other unprejudiced specialists; An application can be petitioned for future exercises too, notwithstanding current or past exercises. Specialized members in NCLT, are best officials who keep up with positions of Secretaries or Additional Secretaries. While CLB didn't have a determination panel, yet NCLT choice council obliges 4 supporters alongside the Chief Justice of India, who will have a making choice.

5. Class Action- Powers of NCLT

S.245 of the Indian Companies Act, discusses class development and makes a move towards fakes and mistakes where the investors and contributors are the fundamental casualties. There has been a long chain of swindling where the organizations enrolled beneath the law committed extortion with the speculations and monetary investment funds in their purchasers and investors. The 2013 Amended Company Act, introduced a few techniques for accurately cut down the wrongdoers by oppressing the mindful to discipline, wherein they should give remunerations to the casualties for the misfortunes coming about because of the false practices.

One or more prominent offended parties aggregately can record a claim for an enormous establishment and speed up the procedure, accordingly addressing an entire gathering of, maybe, topographically scattered heavenliness of people: investors or contributors, who are being violated. A first-class alleviation became provided to the dealers, securing their resources and protecting their freedoms under Section 245. A Class Action might be documented towards both private and public gatherings with an exemption for banking organizations.

Refusal to Transfer Shares

As per the arrangements of Section 58 and 59, assuming any organization will not check in a switch or does any misbehaviors prompting dis-nature of the transferor or transferee, the last option is approved to appreciation for the National Company Law Tribunal, following a term of two months. Significance to agreements or arrangements for moving protections went into with the guide of two or more prominent people as for legitimate conditions likewise are given under Sections 58 and 59.

Reopening of Accounts and Revision of Financial Statements

Under the Companies Act, 1956 there are such a large number of instances of adulteration of books of cash owed which achieved the expansion of various methods to counter this failing inside the Companies Act, 2013. This possibility might be arranged underneath Section 130 and 131 read alongside Section 447 and 448 inside the altered Act. Under these segments bunches are avoided suo-moto starting their cash owed and changing their budget summaries. Segment 130 states that the Tribunal has given the energy to safeguard the position to guide a particular manager to return its cash owed under specific given occurrences. Under Section 131 the association is allowed to modify its monetary affirmation yet not permitted the returning of any bills.

Deregistration of Companies

S.7(7) of the Companies Amendment Act jam power upon the Tribunal to deregister or disintegrate offices which are found to have achieved 'enlisted' prevalence through illicit and improper way. On a basic level, the procedural missteps of enlistment of organizations might be researched or confused through the Tribunal, whenever found dubious.

Important Laws came into Force

Under Section 61 (1) (b) NCLT has the ability to support combination and division of offer capital due to which the democratic level of various investors will change. Section 62(4), (5), (6) discusses further issue of offer capital where organization needs to interest the National Company Law Tribunal, where change of debentures or advance got through an administration is required into portions of the organization, where the terms gave are not agreeable and satisfactory for the organization.

Under Section 71(9), (10), (11) the Debenture holders can document a request before the council when organization neglects to recover debentures of pay interest subsequently, or when the debenture holder has doubt that the organization doesn't have adequate equilibrium. It concedes the organization to recover the debentures and forthwith installment of rule and interest add up to the debenture holder ought to be given. Section 97, 98, 99 of The Companies Act, 2013 shared the Tribunal with the power with assemble upon yearly broad conference of the individuals and if such comprehensive gathering not held as expected or then again assuming that the organization doesn't follow the rules of NCLT then every single official liable for the exclusion would be expected to take responsibility for the fine as recommended under the arrangement.

6. Emerging Role of NCLT

The lawful experts and investors are of the assessment that The National Company Law Tribunal, that is as of now mistaken for around 2,000 monetary catastrophe cases forthcoming, can likewise see the explosion of clean occasions which can hinder the time-bound goal later the financial controller redesigned the way advance defaults are to be dealt with. Financiers are of the assessment, "At the present time, just a portion of the large cases are being attempted, however there are a few examples inside the SME (little and medium association) and mid-cap region in which we have completed the process of rebuilding and it has fizzled. The significant instrument to manage defaulters is rejecting all obligation rebuilding plans by RBI and made goal of horrendous advances time bound with the Insolvency and Bankruptcy Code. As per RBI, accounts with total obligation of more than Rs 2,000 crore will ought to be taken to NCLT inside 15 days assuming a goal plan does now not suffer natural product in hundred and eighty days. "NCLT is as of now underneath stress because of the reality they don't have as numerous people and that they were battling to manage the strain. Around five,000 cases had been alluded up to now to NCLT, which was establishment in June 2016, and extra than 500 cases are at various levels of hearing in which bankruptcy choice has been started. While the council has discarded two,750 examples, there are 1,988 cases forthcoming and 35 gatherings had been put beneath liquidation later their moneylenders didn't consent to the goal plan.

Presently, India has one NCLAT and eleven NCLT seats. NCLT has 22 individuals – sixteen legal givers and 6 specialized individuals. The new seats are relied upon to return up in Bhubaneswar, Jaipur and Kochi. At present, NCLT has one most significant seat in Delhi and 10 seats in Delhi, Ahmadabad, Allahabad, Bengaluru, Chandigarh, Chennai, Guwahati, Hyderabad, Kolkata and Mumbai. The Ministry of not really settled to set up Special courts underneath the National Company Law Tribunal (NCLT) to manage a developing reach indebtedness cases. For Special Courts to be comprised 30 adjudicators is most likely enlisted. The special courts might go with not many specialized people anyway they can't work without legal people. Courts to be establishment 3 in Mumbai, in New Delhi and one each in Chennai, Kolkata and Hyderabad.

The NCLT manages endeavor law occasions and consolidations and acquisitions, aside from indebtedness and monetary ruin cases. Of the essential 12 occasions alluded by utilizing the RBI,

two have been settled. Aside from the specialists working toward a move-line bankruptcy system so it will require the overhaul of foundation at the NCLT, e-courts may be set up so that inside the wards that signal an aptitude with the Indian specialists, pass-line indebtedness legal disputes can happen. Universally, the UNCITRAL (United Nations Commission on International Trade Law) Model Law on Cross-Border Insolvency, 1997, has arisen on the grounds that the greatest broadly successive jail structure to adapt to pass-line bankruptcy issues. The expressed Model Law has been embraced through 44 nations, along with Singapore, the United Kingdom, and the United States. In 2016 the equivalent has been brought about the reception of The Insolvency and Bankruptcy Code.

Case Study 1

Transstroy (India) Limited Case Study after NCLT establishment

Later the foundation of NCLT, The National Company Law Tribunal, Hyderabad Bench has conceded a request for bankruptcy against Transstroy (India) Limited started with the guide of Canara Bank, pronounced a ban and designated indebtedness choice master.

While attesting ban with impact from October 10, until the of aggregate of the Corporate Insolvency Resolution Process or till the Bench endorses the Resolution Plan, or takes up liquidation of the corporate debt holder, the Judicial Member Ratakonda Murali, delegated Govindrajulu Venkata Narasimha Rao, as interval choice expert to complete the abilities underneath the Insolvency and Bankruptcy Code, 2016.

The applicant monetary organization said that it had endorsed Rs 125 crore beneath Fund base running capital cutoff points and Rs 600 crore underneath non-a giggle based working capital cutoff points, which include monetary foundation certifications of Rs 500 crore and letter of credits of Rs 100 crore, totaling Rs 725 crore. The candidate fought that Transstroy defaulted its bills to the monetary organization and that the appeal became documented looking for course of the Tribunal to incite CIRP against Transstroy and observe a choice arrangement.

The business venture is occupied with execution of water system and road drives and finished a few BOT street errands and the fifth one changed into underneath creation. The enterprise is similarly executing a settlement of Rs 5788 crore inside the mega Indira Sagar Polavaram Project in Andhra Pradesh through a joint mission firm.

The Petitioner bank additionally said that two of the properties of Transstroy in Hyderabad have been gotten by involving Special Deputy Collector by means of land obtaining for metro projects and a repayment of Rs one hundred fifty crore became forthcoming. The account holder has benefited term advances and working capital cutoff points from 14 nationalized monetary foundations and under more than one financial arrangement to the music of Rs 2687 crore. Transstroy had also entered squarely into a notice with China CNE Limited of Beijing for a reasonableness cum obligation arrangement of \$ 400 million. The borrower manager hostile the

appeal for indebtedness proclaiming that the case suggest was currently not viable. Subsequent to looking that the applicant bank battled that it had a total case of Rs 686 crore, in addition to premium, the NCLT expressed that it changed into to take in indebtedness legal disputes as the debt holder had defaulted.

Case Study 2

Tata-Mistry Case

The verdict of NCLT on the Tata-Mistry case changed into within the favour of the Tata Group whilst NCLAT set aside the judgment and ruled in favour of Mistry and Shapoorji Pallonji Group. The same has been appealed to the Supreme Court through Tata Sons. The Apex Court set apart the order of the NCLAT, brushed off the expenses of oppression and mismanagement towards Tata Sons Ltd and ruled towards Mr. Cyrus Mistry. The Hon'ble Supreme Court stated the questionable conduct of Mr. Mistry and made a sweeping observation that Sri Cyrus Mistry himself invited problem as he became worried in leaking extraordinarily private and classified information approximately the organization inside the Media just to create sensation in light of which the Apex Court considered his removal from the position of chairmanship and Directorship of Tata Group of Companies as justified.

Findings & Suggestions

The composition of the NCLT as a single forum to cope with Company Law subjects is a welcome move to diverse stakeholders as its miles geared toward presenting a speedy and efficient disposal of the subjects. Apart from supplying fast justice, it will also assist in taking the weight off the overburdened High Courts. However, it is essential that the transition length of converting CLB to NCLT, especially in phrases of transfer of present subjects need to be cautiously treated through the applicable authorities, because the same will determine its effectiveness in due path.

NCLT through its powers, features and jurisdiction is a mechanism that is of exquisite importance because it is an alternative to the CLB, BIFR and the enterprise court to workout powers and functions via its several benches. It is very early to comment about the effectiveness of NCLT in dispute resolution as an alternative to the courts. However, NCLT if implemented properly need to have sure blessings including putting off burden from the organization courts and supplying rapid justice. The independence of the tribunal should be safeguarded and well preserved.

As discussed in LR in specific papers and studies indicates the fair know-how of the method of rehabilitation and completing of ill organizations under a brand-new environment and gives hints for growing conducive surroundings for revival of the commercial economic system. To understand the various regulatory framework, interpretations, various steps concerned and submitting of forms inside the method of corporate restructuring in India its implications and rising troubles on this vicinity. The same also enhance the insolvency and bankruptcy instances and rapid trial after the charter of tribunal. The established order of the tribunal simply assists Indian agencies

in implementing healthier corporate governance practices and will offer higher relations with all stakeholders.

References: -

Dr. Jaswant Saini, S. K. (2020, February). The Emergence of Insolvency and Bankruptcy Reforms in India; in Reference to Company Law Tribunal Working. *Our Heritage*, 68(30).

Govindarajan, D. (2011). Corporate Risk Appetite: Ensuring Board and Senior Management Accountability for Risk.

Jonge, A. d. (2011). Transnational corporations and international law: bringing TNCs out of the accountability vacuum. *Emerald Group Publishing Limited*, 7(1), 66-89. Retrieved 2011, from <https://doi.org/10.1108/174220411111103840>

Kamath, K. (2018). Constitutionality and Constitution of the National Company Law Tribunal and the National Company Law Appellate Tribunal. *Christ University Law Journal*, 7(1), 43-57.

Kanchan Yadav, D. S. (2019). The Regulatory Framework of Corporate Restructuring in India: Implications and Emerging Issues.

Kaveri, V. S. (2018). Establishment of National Company Law Tribunal for Rehabilitation of Sick Companies: A New Era Begins. *Vinimaya*.

Parkinson, J. E. (1995). *Corporate Power and Responsibility: Issues in the Theory of Company Law*. Oxford University Press.

Ram Singh, H. T. (2021). Settlements and Resolutions Under the Insolvency and Bankruptcy Code: Assessing the Impact of Covid-19. *The Indian Economic Journal*, 568 –583.

<http://www.mca.gov.in/>

Company Laws Dr. G. K. Kapoor, Taxmann Publication Pvt. Ltd.

Companies Act 2013 Taxmann

Company Laws N. D. Kapoor Sultan Chand and sons

A textbook of Company Law P.P.S. Gogna, S. Chand Publishing

Company Law P.R. Chadha, Preeti Bahl, Galgotia Publishing Company

A Study on Impact of Teaching and Learning Through Technology Adoption, Exploration and Presentation

Prof. Sajeesh Hamsa

Symbiosis Centre for Management Studies, Pune

Department of Symbiosis International (Deemed University), India

Email: h.sajeesh@gmail.com

Abstract

The paper discusses the impact of technology adoption across stakeholders throughout the educational process, with clear consequences for engagement, knowledge acquisition, and other learning-related factors. It also exposes variables that should be explored for producing much more interactive tools and applications for improved engagement, not just in virtual settings but also through physical encounters.

Key Words: learning techniques, classroom technology, Digital connectivity, Technology adoption and learning

Introduction

Worthy teaching includes teaching learners learn, remember, think and in what manner to motivate themselves. Learning techniques create a helpful information base from which technologies can be built by giving convincing proof and various learning techniques can be implemented. The importance for class time, classroom practices, and academic research may tend to develop as knowledge matures and develops. (Weinstein & Mayer, 1983) The integrated framework like for example the use of technical and communicative skills was found viable and beneficial too. With this the ability to integrate concepts that were frequently offered independently in a safe atmosphere is one of the advantages of learners. So encouraging active learning may help to ensure that these combined qualities are successfully transferred to other processes. (Kneebone & etal, 2002)

Learners are able to better understand when they are actively participating in the learning activity rather than being passive receivers. Because people study through doing the things and it is beneficial for the educator to assess how closely the methods of instruction are linked to the targeted learners' needs. (Cross, 1987) For schooling, it is commonly acknowledged that a student's intuition should be nurtured and strengthened. Fewer, though, realize how much inspiration is or how it could be translated into practical procedures and approaches which can be employed in the education. But also about the ordinary participant's mental lifestyle and how it may be sparked in the classroom, how well the educator can prepare to reach this goal, as well as the strategies in a way the material can be arranged to support this goal. (Egan, 2014)

Certain theories confine schooling to individual psychological ability and hold disadvantaged persons responsible for their status inability. Individuals are at the core of most teaching methods. Individual factors, conceptions of excellent or worst, faster and slow learning, and comparisons of these elements across segments of the population are all central to several of these theories. Acquisition of knowledge is a societal and collective, instead of personal. Behavioral process provides the path out of the existing situations of circumstances. (Lave, 1966)

Technology adoption and Learning

Learners get effectively connected to the content in order to truly understand any new information so that they engage or participate with it. Academicians suggested certain approaches for learning that emphasizes collaboration at the top of the learning experience. (Pritchard, 2017) The phase during which knowledge that the individual has involved with and understood may be rebuilt into a form suitable for presentation but, more crucially, turned into a pattern that will allow class activities to be satisfied from the deliver's perspective. Various questions would then be possible to be addressed out from the perspective of an individual.

Due to the widespread use of devices, Teaching and learning are increasingly using App to aid the classroom process by providing instant availability of variety of free databases. Free Apps has become an innovative and easy instrument for classroom instruction due to a mixture of mediums such as recordings, photographs, and audios, as well as the continuous availability of a supervisor. New forms of education that encourage attentive participation, as well as techniques that eLearning might support better existing new designs. For example, the involvement of educational leaders in giving required medium for effective ict adoption and monitoring, as well as innovative techniques to analyzing the influence of technologies in the classroom progress. (Johnston & Cooley, 2001). The one of the most prominent role on technological use was academics' use of interactive ICT, which has been translated by their relative benefits of education in the learning process using technology.

Some areas within education had quite a minor impact on technology engagement. Furthermore, the quality and the efficacy of technologies were found to influence the effect of education on learners' centric use of technology. So a good partnership between education programmes, experiential learning and focusing on specific technological uses, is one of the outcomes for teaching practice. (Chen, 210)

Technology and engagement

As during lockout, the delivery of content went through the various method of acceptance of tools, while learners engaged in a number of diverse learning environments. Human emotions and efficacy beliefs the use of technological and knowledge change varies from person to person. Despite the fact that pandemic has caused ambiguity in the minds of learners and academicians regarding numerous scenarios that have encountered in the daily lives in terms of individuals, community, and schooling methods. (Shenoy & etal, 2020)

For the last several decades, researchers have speculated on equally beneficial and harmful consequences of learners' constant interaction with technologies. Although ict has a beneficial impact with effective teaching and self-understanding, no substantial clear link involving use of application tools as well the academic success has been discovered. Various studies suggest to a dynamic mix of linkages between individuals' use of technologies and their participation in self-directed tutoring, and theoretical excellence. (Rashid, Asghar, 2016). ELearning is on the upsurge, besides many academic institutions are keen on finding out how to adequately offer course information to student participants by using an online software that affects student involvement. There seems to be innumerable strong relation among attending virtual classes and learning motivation. Logical thinking was more common among students who took a wider variety of online programs. In comparison some of their more conventional teaching peers, individuals were only fewer expected to participate in group work, peer interaction, and in other conversations. Individuals who participated in a greater range of digital programs indicated less familiarity to teaching techniques and poorer quality in outcome. (Dumford & Miller, 2018). In both

physical and virtual education situational settings, the influence of digital culture on learner engagement and MooC learning outcomes demonstrates a general favorable link amongst the practice of online class, class participation and effective teaching.

Information and Knowledge Discovery through Technology

Throughout times of hardship, such like pandemics, there still are various hurdles in education contexts processes in information sharing and transfer. To understand the challenge, different components were necessary, including IT technologies for remote connection, digital learning, content discovery, academia's types of information and internal state of education. These elements work together to enhance transfer of knowledge in the school system during times of crises. (Saide & Sheng, 2021)

External constraints along with administrative objectives are proven to impact an institution's exploratory behavior in the growing co-evolution condition. More global volatility, a deeper organization purpose, an innovation attitude, and wider spare capabilities are mostly linked to an increased exploration orientation, according to research evidences. Obviously, committing a higher resources and manpower to external factors is a question of managerial desire; yet, some present study implies that these has an impact information searches are more localized or comprehensive. (Sidhu & etal, 2004) Promoting interaction among members of an organization using various IT-enabled learning classification such as knowledgebase, information management, and knowledge dissemination is essential. because a ll of these strategies, it was discovered, has a specific impact on the exploration and exploitation dynamics in organizational learning. It's also known that the manner these instruments are combined, the context wherein they work, and the types of learners who do use them all have an impact on the effect of digital learning mechanisms on academic learning in the context of investigation or changing dynamics. (Kane & Alavi, 2007).

Digital self-efficacy, individual/societal norm, user satisfaction, expertise tools readiness, material quality, availability, and digital fun seem to be the most commonly employed environmental factors of the Technology acceptance model addressing e-learning adoption.

Information quality, user satisfaction, and computer fun all have a substantial influence on overall comfort of use of any e-learning system, according to the studies. Additionally, reported simplicity of usage and observed utility of an e-learning system were found to be positively influenced by information disclosure, user satisfaction, and availability. (Salloum & etal, 2019)

Transformation and presentation through Digital connectivity

Different participants' interpretations of the very identical change incident, as well as the similar participant's views for diverse crowds, generate conceptual and analytical challenges in the study and presentation of organizational change data. In order to conceptualize organizational change as a multi-story methodology, it's necessary to accept opposing viewpoints and combine ideas from

a storyline approach to realistic and situational analysis of change. Storytelling is more about narration; it's about eliciting human emotions from a listener, generating and maintaining value, and exposing rival ideas and beliefs. (Buchanan & Dawson, 2007) Leading to increased internet access and education, technologies have not been leveraged to assist the method of education that are thought to stand the most effective medium. The necessary attributes, or qualities, that enable instructors to harness digital resources as effective instructional tools must be seen over the perception of the educator as some adjustment. Awareness, self-efficacy, instructional values, subject and school culture are all important factors in a blended digital learning environment. (Ertmer & etal, 2010). In order to initiate a strategy implementation initiative at an institution, shared understanding, appeal, and symbols were used. Two separate views were used: a "internal" standpoint involving multiple sources and a "external" standpoint using multiple investigators.

It had been established that in the initiation of change initiatives, shared understanding and appeal appeared as key operations. Both procedures were conceptual in nature and fluctuated in precision over the work force's existence. Contrary to popular belief that the shared understanding and control were commonly shown to be interrelated and hard to discern from one another.

Conclusion

In the midst of the turmoil, technology appears to be the one thing that brought teachers and learners together. While educators are using live footage for virtual lectures, learners are reliant on a new system that they were compelled to use. Even while the benefits appear to be considerable, instructors still are grappling with this abrupt change. The transition from in-school to virtual seemed abrupt and unanticipated. The educational profession, as much as the pupils, had to learn to cope with the new practices.

Partners in digital learning have no intention of slowing down. Nevertheless, in prepared to comply with it more effectively, institutions, as well as employees, must be kept up to aware of the latest advances. Educators must be ready to guarantee that digital training continues in the event of yet another tragedy.

The school curriculum doesn't really lie merely inside the creation of innovative technology devices, but also in the creation of a secure and inclusive school experience that is open to all.

Bibliography

Buchanan, D., & Dawson, P. (2007). Discourse and audience: organizational change as multi-story process. *Journal of Management Studies*, 44(5), 669-686.

Chen, R. J. (2010). Investigating models for preservice teachers' use of technology to support student-centered learning. *Computers & Education*, 55(1), 32-42.

Cross, K. P. (1987). Teaching for learning. *AAHE Bulletin*, 39(8), n8.

- Dumford, A. D., & Miller, A. L. (2018). Online learning in higher education: exploring advantages and disadvantages for engagement. *Journal of Computing in Higher Education*, 30(3), 452-465.
- Egan, K. (2014). *Imagination in teaching and learning*. University of Chicago Press.
- Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. *Journal of research on Technology in Education*, 42(3), 255-284.
- Gioia, D. A., Thomas, J. B., Clark, S. M., & Chittipeddi, K. (1994). Symbolism and strategic change in academia: The dynamics of sensemaking and influence. *Organization science*, 5(3), 363-383.
- Johnston, M., & Cooley, N. (2001). *What We Know About: Supporting New Models of Teaching and Learning through Technology*. Educational Research Service, 2000 Clarendon Boulevard, Arlington, VA 22201-2908
- Kane, G. C., & Alavi, M. (2007). Information technology and organizational learning: An investigation of exploration and exploitation processes. *Organization Science*, 18(5), 796-812.
- Kneebone, R., Kidd, J., Nestel, D., Asvall, S., Paraskeva, P., & Darzi, A. (2002). An innovative model for teaching and learning clinical procedures. *Medical education*, 36(7), 628-634.
- Lave, J. (1996). Teaching, as learning, in practice. *Mind, culture, and activity*, 3(3), 149-164.
- Pritchard, A. (2017). *Ways of learning: Learning theories for the classroom*. Routledge.
- Rashid, T., & Asghar, H. M. (2016). Technology use, self-directed learning, student engagement and academic performance: Examining the interrelations. *Computers in Human Behavior*, 63, 604-612.
- Saide, S., & Sheng, M. L. (2021). Knowledge exploration–exploitation and information technology: crisis management of teaching–learning scenario in the COVID-19 outbreak. *Technology Analysis & Strategic Management*, 33(8), 927-942.
- Salloum, S. A., Alhamad, A. Q. M., Al-Emran, M., Monem, A. A., & Shaalan, K. (2019). Exploring students' acceptance of e-learning through the development of a comprehensive technology acceptance model. *IEEE access*, 7, 128445-128462.
- Shenoy, V., Mahendra, S., & Vijay, N. (2020). COVID 19 lockdown technology adaption, teaching, learning, students engagement and faculty experience. *Mukt Shabd Journal*, 9(4), 698-702.
- Sidhu, J. S., Volberda, H. W., & Commandeur, H. R. (2004). Exploring exploration orientation and its determinants: Some empirical evidence. *Journal of Management Studies*, 41(6), 913-932.
- Weinstein, C. E., & Mayer, R. E. (1983, November). The teaching of learning strategies. In *Innovation abstracts* (Vol. 5, No. 32, p. n32).

IMPACT OF COVID-19 ON INVESTMENT EDUCATION AND BEHAVIOR IN CRYPTOCURRENCY AND STOCK MARKET: A STUDY OF INDIAN UNDERGRADUATE STUDENTS

Vishrut Ashish

Student, Symbiosis Centre for Management Studies, Pune
Symbiosis International (Deemed) University
vishrut.ashish@associate.scmspune.ac.in

Dr. Sabiha Fazalbhoy

Assistant Professor, Symbiosis Centre for Management Studies, Pune
Symbiosis International (Deemed) University
Sabiha.fazalbhoy@scmspune.ac.in

ABSTRACT

Background: Small-scale investments have become popular amongst UG college-level students in the recent 1-2 years in India. After the pandemic started, a significant hype around financial literacy and easy **investment education** was promoted, especially online through firms like Moneycontrol, Groww, etc. This trend led to possible positive or negative developments in the **investment behaviour** of undergraduate level students

Objectives: The study intends to discover and comprehend recent shifts in investment education and induced behaviour from the same using a sample of 142 Undergraduate level students in India, during the covid-19 crisis. Further, an analysis of probable factors like social media, peer influence, source of investments, independent auditing reports etc. that educate the investor and influence their investment decisions regarding cryptocurrency and the stock market during the Covid-19 crisis were tested on parameters designed by the author.

Methodology: This is a cross-sectional questionnaire-based study on investment education and behaviour, wherein factors designed by the authors are studied on linear and Likert scales. Participants of this study are Undergraduate level college students all over India, across all streams. On the data collected, the author has applied descriptive statistics and random forest classifier method for analysis and interpretation.

Conclusion: The study concludes that factors such as the use of social media, analysis of stock/cryptocurrency performance, peer influence, etc. have a significant cumulative (about 77%) precision-based impact in educating the young investor and determining the level of investments made in cryptocurrency and the stock market by UG-level students, along with showcasing other individual trends.

Keywords: Cryptocurrency, Investment education, Investment behaviour, Financial Literacy, India, Covid-19, Stock-Market, Undergraduate level students, Social-media

1. INTRODUCTION

“The financial market is designed to transfer money from the active to the patient.”

-Warren Buffet

The highly contagious Covid-19 pandemic caused significant disruption in human life. To combat the outbreak, measures such as social isolation, self-isolation, the closure of educational systems and establishments, the restriction of modes of transportation, and national lockdowns were implemented. While such measures appeared essential given that this was a novel disease with no treatment available, the impact on global economic activity was noteworthy. (Gurbaxani & Gupte, 2021).

A large number of investors, especially people between the **age of 18-25** turned to investing in the stock-market and cryptocurrency during the second half of 2020 up to the first half of 2021. A big surge in the amount of digital content being created for **investor education** and awareness was also significantly high as compared to ever before. This surge was observed almost globally, but its significance in India was highly noticeable because of the unlikely positive performance of the Indian stock-market portfolios. Uncertainty is prevalent in international markets even right now. However, India continues to stand out as the country's raging stock market appears to be disconnected from economic logic in this new-normal. This is why this study is with respect to India. The author intends to find out what were the factors that triggered this immediate increment in the affinity and want for being educated towards such investments and what is the extent of influence these factors hold on the investment practices of the young people in the country of India.

The Sensex, India's standard stock index, has risen 22 percent since the start of 2020, nearly matching the S&P 500. The economic backdrop, on the other hand, is very distinctive. (Bird, 2021) It has also been observed that even during the start of the Covid-19 outbreak, Indian stocks were highly priced, and maybe investors are just eternal optimists. The government appears content to keep supporting the retrieval with a blow of investment spending. However, the pricing of the market is in benefit of the most positive results for India, which is far from definite and maybe even probable. This study focuses specifically on undergraduate level students, because these individuals are the most active on social media platforms wherein fruitful **investment education** information and educational content can be easily obtained these days. It will also be undertaken in this study to analyse the level of impact social media influencers that deliver financial educational content hold on an undergraduate level student's perception of investing in stocks or cryptocurrencies. Furthermore, with market manipulators like Elon Musk, it was assumed for the study that a lot of these undergraduate level individuals were likely to be compelled into investing into cryptocurrencies like Dogecoin, Ethereum etc. just because there was a big hype created around it by their peers and icons on the internet.

The crypto market appears to respond to his tweets regarding cryptocurrencies whenever he does so. Following his tweets, CoinSwitch-Kuber mentioned that they usually witness an increase in their trade volumes.

Elon Musk initially described bitcoin as a 'probably good thing' in 2014. Even this tweet led to people being interested in following up what Elon thought of this virtual currency henceforth.

(Anonymous, 2021) When Elon Musk announced through his tweet that Tesla would no longer accept Bitcoin transactions due to the large-energy usage of mining the Bitcoin, his decision made cryptocurrency go into a tailspin, with Bitcoin plummeting to roughly \$30,000. Through this study, the author intends to draw a connection between the factors influencing these young minds into investing their savings/stipend/income into IPOs, equities or cryptocurrencies, while analysing the extent to which each factor holds a significance regarding these individuals' behaviour. The comparison drawn in this study also intends to highlight the changes (if any) between the pre-covid and post-covid investment scenarios concerning the participants of this study.

2. REVIEW OF LITERATURE

The author has carried out a detailed literature review to compare the findings of other similar studies undertaken before and analyse the research gap. The findings from the literature review are presented below:

3.1. Stock Market Investment Education, Trends and Behaviour

Studies conducted in India:

Christopher Wood, global head of equities strategy at Jefferies feels that the Indian market is still vulnerable even in the absence of definitive evidence that the second wave has peaked. Reducing weight by 0.5 ppt in China and 1.5 ppt in Malaysia will lead to a rise in the overweight of Indian equities from 2 ppt to 14%. (Wadhwa, 2021). In small regions of Madhya Pradesh, it was found that during the Covid-19 crisis, there was no change of investment behavior with age (Gurbaxani & Gupte, 2021). However, the significant finding was that due to lockdown and other restrictions leading to changes in recurring income, people reported a drop in investments like SIPs etc. (Himanshu, et al., 2021) In a lot of financial assets like securities, bonds etc. people have been observed to be shifting their portfolios to risk-free or conservative portfolios, during the pandemic. However, this is not true in with respect to all investors, but because of the returns on risky-assets not being as anticipated, investors are making this switch. In the view of raising fears of a complete lockdown in Maharashtra and other states, the stock market entered the week and the SENSEX fell 1,700 points in intraday session. Last year, the benchmark indices fell by approximately 40% in two weeks which seems to be the situation for today's market drop. (Kaur, 2021).

During the post covid-19 pandemic time frame, it was discovered that there are proof and significant instances of herding behavior during the first half of 2020. Furthermore, the COVID-19 pandemic has induced herding behavior at the industrial level. (Dhall & Singh, 2020). (Khan, et al., 2020) In the city of Mumbai, India, it was evident from research that during the pandemic, income and education also had crucial impact on the investment behaviour of individuals living in this region. There was an increase towards the investment in real-estate assets. Gold and

other kind of investments also witnessed an increase, but not very significant. According to some financial experts, (Moneycontrol, 2020) instead of just taking into consideration the profit projections and company's revenue, investors must also be mindful of examining the sustainability index of a business before investing during uncertain time. With roughly 14% SENSEX returns in 2019 with blue-chip businesses including HDFC Bank ICICI Bank and many more, there was a limited rise of 8-10 stocks in the stock market. COVID-19 strike has caused global markets to plummet to levels not seen since the Global Financial Crisis of 2008. (S.Ravi, 2020)

The first review study is related to the Investors in Jaipur and Moradabad which concludes that before investing in shares, the Investors should make fundamental, technical and financial analysis. (Singh & Yadav, 2016) Furthermore, irrespective of the age and gender, the Investors should keep in mind the different avenues as well as the risks associated with it while investing the funds in the market.

Global/Foreign Studies:

Due to a huge increase in market liquidity, financial markets and most asset classes throughout the world are heading upwards despite the impact of COVID-19. Due to cost-cutting and some vaccine-related benefits, domestic stock markets have been benefited from increased liquidity and improved profitability. (Bhargava, 2021).

According to the system i.e., GMM estimation results, a firm's investments in both tangible and intangible assets are considerable impacted by the peer companies. New companies are more likely to imitate their industry counterparts' investment decisions. However, business leaders do not believe copying to be a tactical strategy. (Said & Rashid, 2021) Corona Virus (COVID-19), is the most contagious disease in the last 50-year history, that spread immensely across the globe, attacking millions of individuals by 2020. Aside from killing a large number of people, the crisis not only caused widespread mass panic, but it also had a significant impact on global industries and financial markets. In a study conducted specifically for the Pakistan Stock-exchange, it was found that there was a slight increase in the number of individuals investing in the stock market in Pakistan in the year 2020. This study specifically analysed the factors such as motives and methods that individuals were relying on for getting into investing or continuing their portfolios, and presented an understanding for the country during the first year of the pandemic. (Riaz, et al., 2020). In another study conducted for the investor trading around the Egyptian region during the Covid-19 outbreak, the findings suggest that individual and organizational investors' investment behavior for Egyptians, Arabs, and foreign nationals seems to be delicate to the outbreak of Covid-19. (Allam, et al., 2020). It was discovered that personal and institutional investors' aspirations fluctuate evidently during the Covid-19 outbreak catastrophe, and in broad sense, Egyptian shareholders continue to try to circulate and not dilute their stock portfolios during the downturn of the pandemic. It is found in the reviewed study that the households' Investment and socio-economic factors influence the stock market Investment decisions. In addition, risk tolerant households are more participative in the markets than the risk loathing households (Mishra, 2018). It has been worthwhile seeing Kenyan undergraduate students making investing decisions depending on the

source of information related to investment used by each investor. 206 people from three of Kenya's most prestigious institutions were asked to fill out the questionnaires so as to witness if any of them was influenced by their peers while making financial decisions. (Mwenda & Mukami, 2017).

3.2. Cryptocurrency Investment Education and Behaviour

Studies conducted in India:

This research explains that how the concept of cryptocurrencies is entirely different from the current monetary system and hence why, difficult to accept.

It briefly tries to cover much of the aspects of cryptocurrencies like history, advantages and disadvantages and challenges and opportunities. (Kumar & Swathy, 2020). In this paper author goes into the technicalities of the cryptocurrencies and how it uses cryptography and block chain technology to keep track of every transaction in the whole network. He goes on to write about the status of cryptocurrencies in the present scenario and how in spite of being around for a decade it has not achieved the status of modern currency. He also adds the factors that can be a hindrance for the cryptocurrencies in achieving their true status. This paper specifically presents the view point of cryptocurrencies from the Silicon Valley of India. (Shukla, 2019).

Young individuals nowadays are more responsible for their financial affairs than ever before in their lives. They seek to be financially educated and accountable. Pension and social welfare structures are being strained as life expectancy rises. Employer-sponsored defined benefit (DB) pension plans are quickly giving way to private defined contribution (DC) plans in many countries, transferring obligation for retirement saving and investing from employers to employees. (Lusardi, 2019)

Studies from all across the globe suggest that there is a scarcity of investment and financial education even as of today. This finding has promoted the launch of financial education programs in many countries to attract the investors into being aware and pursuing investment instruments. In India, the need for financial education is increasing day by day due to the large section of population that still remains oblivious to investment options and opportunities. (P., 2018)

As name suggests this paper aims to answer whether cryptocurrencies are a boon or a bane for Indian tech industries and how it will impact Indian economy. This paper also includes insights how Indians invest and hold Bitcoin. (J.P.Jaideep, 2019). The first reviewed study's main focus is to determine what cryptocurrency is all about its impact on Indian economy. It also explains the concept of decentralization which bitcoin leverages. The study also tries to explore the present scenarios and future prospects for digital currencies in future. (James & Parashar, 2018).

Global/Foreign Studies:

This article was studied in order to understand the main strategies required to make investments in cryptocurrencies. Basically, the tactics to invest and highlight the key contributions were selected to study this literature. It also focussed on it deliquesces, problems related to economic and social growth, and improving the longevity of the usage of cryptocurrency in the coming future as well. (Giudici, et al., 2019). This paper revolves around establishing that the risk-return trade-off of

cryptocurrencies are far from those of shares, commodities and currencies. Cryptocurrencies don't get the exposure to the common share and macro Eco factors but in contrast it they have their own unique factors affecting them. Authors have also developed an index for the such currencies of industries in US and China. (Liu, 2018).

This research was carried out to study the propagation of cryptocurrency among the youth to make sure it had a better idea from the practical aspects as well. It's main objective also focussed, through the valuable responses provided by 21 countries, on laws and legislations towards cryptocurrency to build a better viewpoint of looking at the effects of numerous laws that are run in India to have a better look at executing it. (Jani, 2018)

3.3. Some factors influencing investment education & behaviour in people across all ages

Psychology has a great role to play in the stock-market conditions of 3 major countries- China, Japan and the United States. Due to the increased mental pressure, a downfall was observed in the willingness to invest into securities during the pandemic. (Naseem, et al., 2021) The author wishes to analyse this emotional aspect with respect to the Indian sub-continent and conclude if similar results are procured or not. (Sohail, et al., 2020) The most significant factors affecting the investment behaviour of individuals is the market position and volatility. It was evident from this study that physiological factors are the least significant when it comes to having an influence on investment decisions. Broker advice and government policies also impacted a good proportion of individuals to regulate their investments in accordance with these factors. Investors increased the brokerage deposits they held and a large number of new accounts were opened during the pandemic. Infact, there was a surge of almost 14% (13.9%) in the mean trading intensity per week, and this was directly proportional to twice the increase in the number of Covid-19 cases in many geographical regions. (Ortmann, et al., 2020) This finding inspired the author to undertake a similar approach of analysing whether new accounts were opened for investing and trading in India as well, especially by younger under-graduate level adults.

To sum up the findings of this research, the purpose is to scrutinize the correlation between awareness on Investment and the independent variables which includes financial literacy, personal interest, and environment. The results reveal that the young generation is notably based on fore-mentioned independent variables. (Azhar, et al., 2017). A study explains the need of investor education which shall improve the participation of Investors and help them in informed investment with good returns. It also includes the requirement of media awareness which would motivate young generation to participate in the capital market. (Saikia, et al., 2015). Further, in a research that undertakes the positive financial behaviour and high financial knowledge of Indians, it included mainly the employed and retired audience. This positive financial attitude and knowledge is seen more in men than women. However, the financial knowledge in students is low which in turn reflects poorly on the academic outcome. (Agarwalla & Barua, 2012)

3.4. Behavioural Finance

As observed in the other papers reviewed, it is evident that an investors' investment decisions are heavily influenced by behavioural biases. The purpose of this paper similarly is to investigate the impact of demographic factors such as age, gender, and education on an investor's experience with

regard to investments. For this study, the authors collected data from a sample of 100 IT employees in Pune. This study focuses on overconfidence and herding behavioural biases in investment strategies based on demographic variables. (Sonawane, et al., 2021). Few developing countries are currently promoting the empirical power of behavioural finance as an investment tool. The idea has received significant attention in advanced countries; however, its implementation and soundness issues are being debated almost everywhere in the world. The study therefore provides a thorough decisive investigation to promote the field of behavioural finance. Furthermore, the paper offers a route for further research into the various issues related to this appealing and worthwhile area. Behavioural Finance, Herd Behaviour, Cognitive Biases, Efficient Market Hypothesis, Behavioural Factors, and Stock Returns are some of the terms used in this paper. (Kumar, 2020) The authors through this study have accomplished by spotlighting the flaws in the concept of market productivity and recommending how these flaws can be filled with a greater approach such as behavioural finance. The paper identifies gaps that exist in behavioural finance and how they can be filled in order for this branch to be recognised as a progressive alternative approach to EMH through more discussion of emerging trends in behavioural economics and finance.

(Sharma & Kumar, 2019). This paper intended to highlight that how different individual have different levels of risk tolerance when it comes to making investments in equity derivatives. It also highlighted how the Heuristic Variable is a very significant influence when investors have limited resources and also the investment made is for a shorter duration. It also emphasized upon the gambler's fallacy bias. Gambler's fallacy happens when investors estimate the probability of an event by considering how well it reflects its parent population, i.e., a pattern of the same outcome. While some people invest solely for loss aversion and end up losing more money which changes their perceptions about investment decisions almost permanently.

(Dhungana, 2019). Through this study I learned about people's mentalities while investing in various investment avenues. In other words, what do they consider when making investments? This paper intended to explore the major impact of behavioural finance concepts such as overconfidence, belief, reinforcing cognitive dissonance, regret aversion, slim framing, and mental accounting on the stock market decision-making state of an individual investors. Finally, the study concluded that investors mostly irrational, and the consequences of the aforementioned factors on the decision-making procedures of investors are always present in varying degrees (Upadhyay & Shah, 2019). This paper mainly focussed on how behavioural finance has emerged as a new paradigm. It also aims to evaluate the shortcomings of the traditional financial theory as identified by the supporters of behavioural finance, as well as to evaluate the importance of behavioural finance. It gave a basis for further taking into consideration the behavioural aspect of young investors for this study under concern. (Sharma, 2016) Restrictions to arbitrage, which contends that it can be challenging for logical and reasonable traders to nullify the displacement caused by less rational traders, and psychology, which catalogues the types of deviations from full reasoning that we might expect to see. These are the two pillars of the field of behavioural finance as mentioned by Barberis & Thaler. (Barberis & Thaler, 2002). They discuss these two topics before presenting a number of applications of behavioural finance to the stock market as a whole, to the cross-section of average

returns, to individual investment decision, and to corporate finance. They conclude the study by evaluating the field's progress and commenting on its future direction.

3.5. Investment Preferences, Literacy and Awareness across ages

This study analysed the financing decisions of the Raipur city's younger population. The research found that the Young Investors are more tempted towards investment avenues like Mutual Fund, Equity Market for trying to maximize their capital, however some people are more interested in less risky options such as Bank Deposits and Postal Service Deposits. During the course of this study, it was also discovered that 32% of the Modern Generation is predisposed towards Mutual Funds and 25% of the younger investors are inclined towards Equity Market, which is very significant from the study. (Pandey & Vishwakarma, 2020). This study was conducted using a survey circulated among 110 investors. It was found that investors are found to be risk averse, with mutual funds, insurance, fixed deposits, and gold being the most attractive investment options. According to this survey, young investors prefer to keep financial planning at an earlier stage of their career; however, due to a lack of understanding, it is difficult to separate the accurate financial plan. Therefore, marketers should design investment programs to pay attention to the specific needs of these investors. From this study, the I took inspiration to cross-check whether these were actually the most popular investment attractions among young investors (Gadde & Gupta, 2020). In this study young professionals, the most of whom work in the private IT sector and earn an average income of Rs.20,000-50,000 were the primary focus audience. The research team used a structured questionnaire to ask young professionals in India about their investment habits and awareness. Secondary data was gathered from business journals, websites, and news channels. According to the findings, numerous factors such as age, gender, income levels, family, and peers of the investors have a significant influence on their financial decisions. (Kakade, n.d.)_Another study was carried out in and around the region of Dakshin Kannada and the Udupi District by the respective authors. It focuses on individual investors falling between the ages of 20 and 35, and how they make investments in the stock market. The study also examines the young investor's mindset towards these investments made.

The author at the end of this study discovered that young investors do not take more risks when investing in stocks, and if they do, they tend to go for speculation with a high return on investment, and they are occasionally unaware of obtainable financial products for investment. The main issue found is that they lack the patience to hold the stocks for an extended period of time to get the desired results. This may make these young investors disinterested soon about their investment decisions sometimes. (Maroor & Baliga, 2018). Personally, and financially, the younger generation is more adventurous and technologically savvy than the older population. One specific question that arises often is if the young generation is worried about and aware of their financial situation in the future, as well as their investment. The purpose of this study was to look into young people's attitudes toward investing. The findings show that the key determinant of investment activities among the young people is significantly influenced by the independent variables chosen for this study like income, age etc. (Mohamed, 2017).

3. RESEARCH GAP

The author recognized a gap that exists in correlating factors such as social media content, peer-influence during the last one year, past-performance of stocks/cryptocurrencies etc. as a source of investment education that further might induce a positive or negative investment behaviour. Factors like fear of risk and objection by parents were not undertaken in any previously conducted study to relate with the impact on investment behaviour and a boundary to being financially educated.

This study is being carried out specifically with respect to the undergraduate level students in India. No study has previously undertaken in the same demographics and analysed them on the chosen factors, as in the case of this study. The study also aims to capture any change in the case of new Demat registrations being done more frequently during the covid-19 crisis.

4. RESEARCH QUESTION

The study aims to understand what impact did Covid-19 pandemic and the lockdown-environment have on the level of education regarding investment in Stock market and Cryptocurrency, and the resulting investment behaviour of Undergraduate level students regarding the same?

5. RESEARCH OBJECTIVES

1. To find the instantaneous investment education/literacy and behaviour changes instilled in young students through the same after the start of the pandemic.
2. To find whether investment behaviour is sensitive to gender and know the sourcing of investments for UG-level students.
3. To understand the relation, if any between the chosen parameters for the study.
4. To study the cumulative impact of all the factors on investment education and thus, investment thresholds and measure their precision using relevant statistical tools.

7. HYPOTHESES TESTING

In light of the discussion in preceding sections, the following hypotheses are proposed for the study:

1. H₁: The level of impact in drawing attention towards investing is almost same for both male and female students (no non-binary students were found to be present for the study)
2. H₂: The students who use social media as a source of investment education to base their investment decisions upon, are also likely to be influenced to invest in a stock/cryptocurrency on the advice of a peer.

8. RESEARCH METHODOLOGY

The overall objective of the study was to comprehend which factors developed during the covid-19 pandemic have a varied degree of effect on the investment decisions made by UG-level students in

2021. Data collection through Questionnaire was selected as it proved to be the most feasible way to get the responses of the Undergraduate level University students who are known to the whereabouts of the current investment trends.

A self-administered questionnaire was used to collect necessary data for the analysis of the study. The questionnaires were distributed to various UG level university students. A pilot test of the questionnaire was conducted among a small sample to rectify the errors of the questionnaire. Based on the feedback from the Pilot test, changes were made in the questionnaire and then the new version was circulated to various UG level university students. A Sample size of 142 student responses was taken for the study. This was done to account for the 38 students that mentioned in the survey that they did not participate in any kind of investing activity at all. Thus, even then, a good sample portion of 100+ students were available to the author to analyse the potential investment behaviour in the remaining young investors regarding certain specific factors.

The subjects were randomly selected irrespective of any bias or classification. The Geographical location of India has been selected because the survey was circulated online to students living across different cities during the ongoing pandemic. The students were asked numerous questions regarding what factors they agreed to being influenced and educated by when making decisions to invest in stocks or cryptocurrencies. These factors were then made to be rated on a linear scale of 1-5 by these students, to determine the level of impact of each factor for every student. The study is being done for the time-frame after the start of Covid-19 crisis, because the factors chosen for the study held more significance when people were isolated at homes and also because of the recent hype-movements in the financial markets. Likewise, after the pandemic struck, a lot of content was curated digitally to attract amateur investors to the markets. Thus, the study holds its significance in the Covid-19 times.

Descriptive statistics has been used for data analysis to study the different aspects of the variables. Descriptive statistics was chosen as it helps in simplifying large amounts of data in a sensible way. Use of graphs made it easy to present the findings in a meaningful way. Different variables were selected at a time to see the relation among them and generate conclusive findings. Values such as means and standard deviations helped analyse the level of broad impact of the factors chosen for study and gave clarity. Further, Random Forest classifier method was used to understand what is the cumulative significance of all the chosen factors and how does it influence the level of investments that these young investors are making.

9. DATA ANALYSIS

9.1. Testing for H₁: The level of impact in drawing attention towards investing is almost same for both male and female students (no non-binary students were found to be present in the study).

In the study, it was firstly observed that about **68%** of the students agreed to have got a Demat account opened after the pandemic started. This itself implies that the lockdown scenario played a role in diverting interests towards investing through simple and user-friendly investment education.

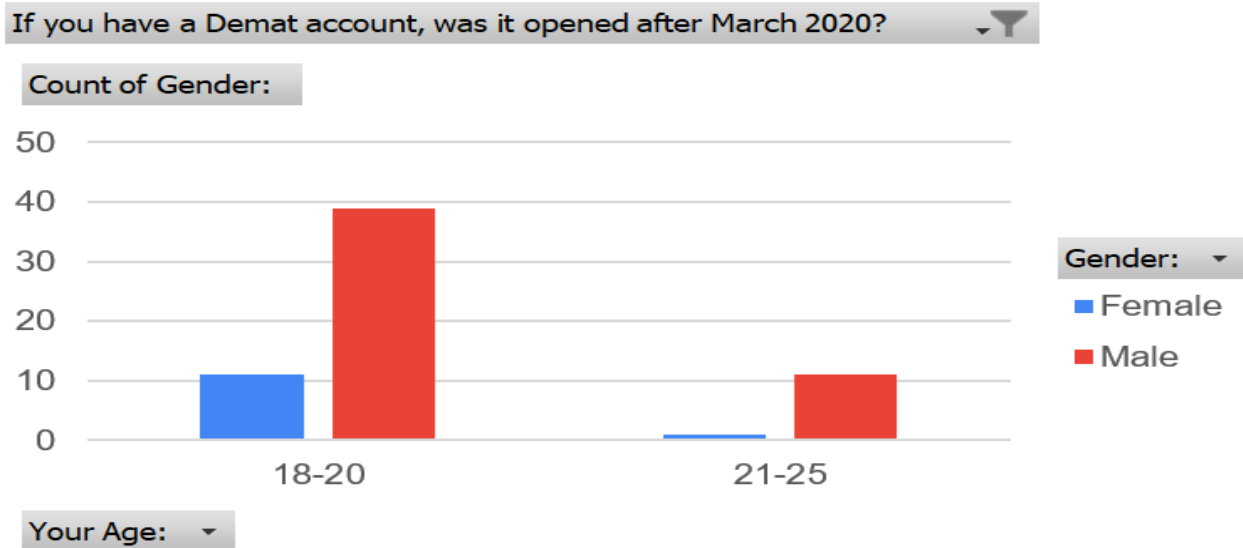


Figure 1

Graph representing the difference in no. of Demat accounts opened after March 2020, by male and female UG-level students.

From Figure1 it is very clearly evident that there is a huge difference in the number of males who opened a Demat account after the pandemic started, in comparison to the females. This vast gap is observed in both the age ranges. Hence, the statistical evidence goes strongly against the null-hypothesis. Here, p-value lies lesser than 0.05. **Therefore, the null-hypothesis H_1 is rejected and the study accepts the alternate hypothesis.** It was also observed in the study that over **57%** of the total participants, those students who invested used **pocket-money/savings** as their primary source of funds for putting into portfolios of their choice. About 81 students used this as the source of investments.

9.2. Testing for H_2 : The students who use social media as a source of investment education to base their investment decisions upon, are also likely to be influenced to invest in a stock/cryptocurrency on the advice of a peer. Through the questionnaire, the participants were asked to input the level of dependency on 2 factors. One was how actively they were seeking financial education through social media, and secondly, how likely were they to invest in a stock, IPO or cryptocurrency if a friend suggests them to do so.

From a correlational analysis of the values for every individual under both of these two scenarios, it was found that the **Correlational coefficient= 0.687**

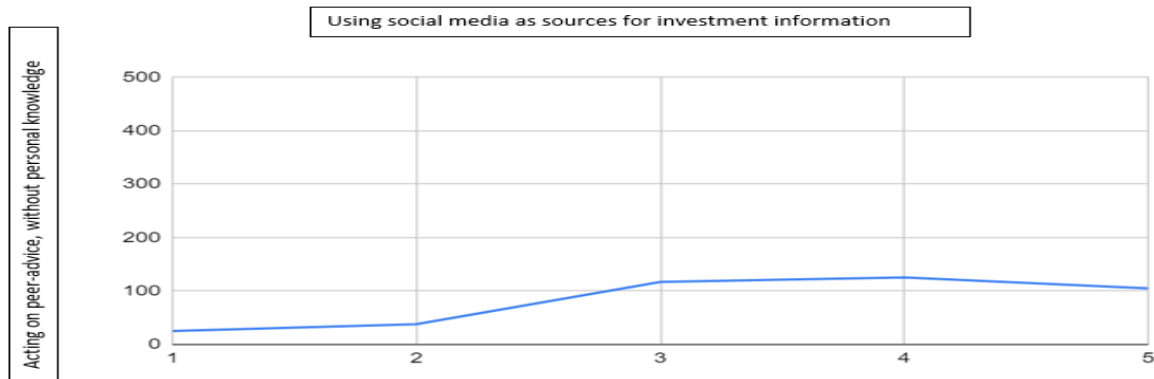


Figure 2

Upward trend graph representing how undergraduate level individuals relying on social media information education or information sources are also influenced by peers to invest into a particular share or cryptocurrency.

The above graph also suggests almost an upward trend between both of these two factors, though not a very strong one. Thus, it is safe to say that young students who actively use social media as their source of guidance on investments are likely to use their peer's advice as the basis to make an investment decision even without having proper personal knowledge. Here, the p-value is definitely greater than 0.05. **Hence, the null-hypothesis H_2 is accepted.**

Analysing the cumulative effect of chosen parameters on the investment threshold (amount in INR) using Random Forest Classifier

The factors being considered for measuring their level of impact on investment behaviour are in a broader perspective and have been recorded on a linear scale of 1-5 by the respondents of the study.

The chosen factors are:

1. The Level of investment influence by educational content and influencers on social media
2. The Level of investment influence by peer recommendations (even when the participant has zero personal knowledge)
3. The Level of investment influence if the student's parents object to him/her investing money in stocks/cryptocurrencies.

4. The Level of investment influence by the presence of convenient trading apps like wazirX, Binance, Upstox.
5. The Level of investment influence by fearing a risk of loss of money (negative factor)
6. The Level of investment influence by hoping to make quick money.
7. The Level of investment influence by analysing past-performance of a stock/cryptocurrency

After taking and analysing the responses from the participants of the study (including both investors and non-investors), a mean and standard deviation of the values from the linear scale was drafted for each of these factors. This was done to get the gist of student perceptions and where actually they are sourcing their investment knowledge and investment habits from.

Here, the values are comprehended in this particular reference:

Mean values less than 2 shows that variables have very low impacts

Mean values between 2 to 3 shows that the variables have low impacts

Mean values between 3 to 4 shows that the variables have good impacts

Mean values between 4 to 5 shows that the variables have high impacts

SD must be <2 for a notable inference

The table below represents the data for the same:

Factor	Mean	Standard Deviation	Impact on Investment Decision
Social Media/Digital Content	3.158273381	1.270919866	Good
Peer Influence	2.791366906	1.305631522	Low
Objection by Parents	2.481751825	1.356800604	Low
Ease of Trading through apps	3.470588235	1.408697649	Good
Fear of Loss	1.992125984	1.411404968	Very Low
Getting rich Quickly	3.059259259	1.153178943	Good
Past Performance of Stock/cryptocurrency	3.413533835	1.189729353	Good

Table I

The table represents the mean impact (on a scale of 1-5) of chosen factors, as admitted by the participants of the study.

Here fear of loss did not prove to be a negative factor in most cases. Hence although impact is low, it leads to positive investment decisions.

Now, applying the Random Forest classifier method using Python, it can be found out that for each level of investment (in terms of different amounts in INR), what is the significance of all chosen factors working together. A **random forest** is a meta estimator that fits a number of **decision tree classifiers** on various sub-samples of the dataset and uses averaging to improve the predictive accuracy and control over-fitting.

Therefore, by including the linear scale values of all the parameters from each respondent (as the X values) and taking Investment threshold (as the Y value or **Dependant variable**), a **confusion matrix** (Figure 3) was formed. The diagonal elements in the matrix represent the number of totally accurate values (for the **monthly investment thresholds**) out of the total values present in that row (i.e. The total number of students falling into that threshold).

Confusion Matrix:

51	0	0	0	1
7	4	3	0	2
3	0	24	0	2
4	0	1	2	3
3	0	1	0	21

Figure 3
Confusion matrix representing accurate values as diagonal values for each threshold of investment

The Random Forest table below shows the cumulative **precision** of all the seven factors taken above, while the **recall** represents how many truly relevant results were returned. The F-1 score in the table is taken as the weighted average of the precision and recall, where an F1 score reaches its best value at 1 and worst score at 0.

Classification Report:

		Precision	Recall	F1-score	Support
I do not Invest	0.0	0.75	0.98	0.85	52
Less than 500 INR	1.0	1.00	0.25	0.40	16
500-1500 INR	2.0	0.83	0.83	0.83	29
1500-3000 INR	3.0	1.00	0.20	0.33	10
3000 INR and above	4.0	0.72	0.84	0.78	25

Accuracy			0.77	132
Macro Avg.	0.86	0.62	0.64	132
Weighted Avg.	0.81	0.77	0.74	132

Table II

Random forest classification representing the accuracy and precision of all the chosen factors cumulatively, towards different investment thresholds.

It is evident from the table that for each investment threshold ranging from 500-3000 & above INR, the precision is fairly more than **70%**.

This implies that under this study model, all these factors hold a likewise cumulative influence in deciding the final monthly amount invested (or not) by these students, both working as positive or negative factors accordingly. This can be understood in the sense that for every person who chose **“I do not Invest”** also rated his/her social media usage, peer-influence etc. to not be persuasive enough to compel them to invest. On the contrary, the students actually investing an amount into portfolios, will have definitely rated the seven factors as relevant to their personal lives and hence, their investment decisions.

The final accuracy of this study model comes out to be approx. **77%**, which implies that the factors undertaken for the study including educational sources are highly relevant as determinants of the level of investments the chosen UG-level students are putting into stocks and cryptocurrencies.

10. FINDINGS

From this study, it is pretty evident that after the pandemic hit, investment education boomed extremely well through digital content and it helped promote a positive investment behaviour in more than 3/4th of the cases. It was also found that most of the young investors between age 18-20 use their pocket-money/freelance payments as a source of funds for investing, instead of a recurring source of income as is absent in their case. Further, the study revealed that after the pandemic started, male investors have been far more attracted towards investing in comparison to female investors. This implies that after the crisis hit the world, with the presence of simple to follow investment education sources, male students in India turned newly to investing while most of the females did not find this domain relevant to start investing.

From the statistical analysis done on the data collected, it was clearly proven that the chosen factors in the study not only individually held a significance over how a student think and behaves regarding investments, but also that these factors together play a vast role in deciding how much amount an individual young investor is putting in their portfolios on a monthly basis. To sum up, these were the primary findings of this study.

1. 81% UG level students use their pocket-money/stipends as a source of investments.
2. Male students are more likely to engage in herd behaviour/ be interested when it comes to investing using digital content as investment education sources.
3. Social media literacy content and peer-influence played the most significant role in influencing investment behaviour during Covid-19 pandemic.
4. There was a drastic increase in the level of involvement and financial literacy during the year 2020.

11. CONCLUSION

The aim of this paper was to study the relationship between both - investment education and investment behaviour, while also quantifying the actual investments made (in INR) with respect to the chosen factors for the study of undergraduate-level college students in India. In theory, it is commonly believed that investments in the stock market and cryptocurrencies are things that need way too much professional knowledge to properly be executed. It is also a practice in India, for people to be sceptical about putting their money into investments.

This study however concludes that the young people lying mostly in the age range of 18-21 are nowadays actively involved in taking their own financial decisions and are aware of what triggers or not triggers their perceptions regarding the same. They are eager to learn and be financially educated. The use of descriptive statistics and Random Forest classifier for analysing the parameters of the study proved out to be fruitful and gave a very significant indication that the factors chosen by the author to undertake this study are in fact very crucial in deciding how often and how much money these young investors are investing (in the case of students who invest). The mean values themselves predicted a wider impact that the participants of the study agreed to have experienced by factors like social media, gut feeling of getting rich etc. The standard deviation was less than 2 in all cases, indicating that the values in each individual's case do not move very far from the mean.

12. LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

Following are the few limitations of the conducted study:

1. The sample size is not large enough to imply the study effectively on the vast Indian population.
2. Some of the responses to certain questions in the survey may not have been honest or accurate.

This study by the author successfully establishes a relation between the factors having an impact of the undergraduate level students' investment education decisions and perception. It also assesses the pre-covid and post-covid pandemic scenarios by comparing them parallelly. The scope for further research for this study is to analyse whether in the near future, when the pandemic is over

and restrictions across the world are limited, will these factors undertaken in the study still hold their significance or not. Considering that people will swiftly start getting back to more-normal lives and be busy unlike now, since all undergrad level students are studying from home. Therefore, will the time factor also change the level of impact of these factors of the study? This is yet to be concluded and can be undertaken for further study on this topic.

REFERENCES

1. Adeyeye, P. O., Aluko, O. A. & Migiro, S. O., 2018. The global financial crisis and stock price behaviour: time evidence from Nigeria. *Global Business and Economics Review (GBER)*, 20(3), pp. 2-9.
2. Agarwalla, P. S. K. & Barua, P. S., 2012. A Survey of Financial Literacy among Students Young Employees and the Retired in India. *Indian Institute of Management Ahmedabad*, 1(1), pp. 4-22.
3. Allam, S., Abdelrhim, M. & Mohamed, M., 2020. The Effect of the COVID-19 Spread on Investor Trading Behavior on the Egyptian Stock Exchange. *SSRN*, 18 June, pp. 1-13.
4. Anon., 2017. Investment Awareness Among Young Generation. *Advances in Economics, Business and Management Research*, 36(11), pp. 5-23.
5. Azhar, Z., Juliza, Azilah, N. & Syafiq, A., 2017. Investment Awareness Among Young Generation. *Advances in Economics, Business and Management Research*, 36(11), pp. 5-23.
6. Azhar, Z., Juliza, Azilah, N. & Syafiq, A., 2017. Investment Awareness Among Young Generation. *Advances in Economics, Business and Management Research*, 36(11), pp. 126-135.
7. Baliga, D. B. V. & Maroor, D. J. P., 2018. Individual investment behaviour of young investors in stock market. *NOLEGIEN Journal of Consumer Behavior & Market Research*, 1(1), pp. 1-26.
8. Barberis, N. & T. & Richard, 2003. A survey of Behavioral Finance. *Handbook of the Economics of Finance*, 1(1), pp. 1-19.
9. Bhargava, K., 2021. *Why is share market resilient in face of Covid-19?*. [Online] Available at: <https://www.financialexpress.com/market/cafeinvest/why-is-share-market-resilient-in-face-of-covid-19-kalpen-parekh-reveals-says-watch-these-stocks-interview/2254224/>
[Accessed 1 June 2021].

10. Bird, M., 2021. *The Wall Street Journal*. [Online] Available at: <https://www.wsj.com/articles/indias-stock-market-mania-defies-economic-reality-11613732914> [Accessed 2 June 2021].
11. Dhall, R. & Singh, B., 2020. The COVID-19 Pandemic and Herding Behaviour: Evidence from India's Stock Marke. *Millenial Asia*, 11(3), pp. 366-390.
12. ET Spotlight Special <https://economictimes.indiatimes.com/markets/cryptocurrency/extent-of-elon-musks-influence-on-cryptocurrency-where-is-it-headed/articleshow/83037268.cms>, 2021. *Extent of Elon Musk's influence on cryptocurrency; where is it headed?*. [Online] Available at: <https://economictimes.indiatimes.com/markets/cryptocurrency/extent-of-elon-musks-influence-on-cryptocurrency-where-is-it-headed/articleshow/83037268.cms> [Accessed 15 June 2021].
13. Jefferies, C. W., 2021. *Business Standard*. [Online] Available at: https://www.business-standard.com/article/markets/indian-stock-market-vulnerable-to-the-rise-in-covid-cases-chris-wood-121043000242_1.html [Accessed 12 June 2021].
14. Khakhar, D. C. D., Aggarwal, N. & Rughani, D., 2019. A Study on Behavioral Finance in Investment Decisions of Investors in Ahmedabad. *International Journal of Research in Commerce, Economics and Management*, 9(12), pp. 1-17.
15. Liu, Y. & Tsyvinski, A., 2021. Risks and Returns of Cryptocurrency. *The Review of Financial Studies*, 34(6), p. 2689–2727.
16. Mishra, R., n.d. Financial Literacy, Risk Tolerance and Stock Market Participation. *Asian Economic and Financial Review*, 8(12), pp. 1457-1471.
17. MoneyControl Contributor, 2020. *MoneyControl*. [Online] Available at: <https://www.moneycontrol.com/news/business/markets/time-to-align-your-investments-to-the-new-normal-post-covid-19-check-these-essentials-5369381.html> [Accessed 15 May 2021].
18. Mr.J.P.Jaideep & Jyoty, M. K. P., 2019. A Study on Cryptocurrency in India – Boon or Bane. *Journal of Emerging Technologies and Innovative Research*, 6(2), pp. 412-417.

19. Naseem, S. *et al.*, 2021. The Investor Psychology and Stock Market Behavior During the Initial Era of COVID-19: A Study of China, Japan, and the United States. *Frontiers in Psychology*, 12(1), pp. 1-10.
20. Ortmann, R., Pelster, M. & Wengerek, S. T., 2020. COVID-19 and Investor behavior. *Finance Research Letters*, 37(-), pp. 1-20.
21. Pandey, S. K. & Vishwakarma, A., 2020. A Study on Investment Preferences of Young Investors in the City of Raipur Chhattisgarh, India. *PalArch's Journal of Archaeology of Egypt / Egyptology*, 7(9), pp. 9757-9768.
22. Ravi, S., 2020. *Business World*. [Online] Available at: <http://www.businessworld.in/article/Impact-Of-COVID-19-On-The-Indian-Stock-Markets/11-05-2020-191755/> [Accessed 23 June 2021].
23. Riaz, S., Ahmed, R., Parkash, R. & Ahmad, M. J., 2020. Determinants of Stock Market Investors' Behavior in COVID-19: A Study on the Pakistan Stock Exchange. *International Journal of Disaster Recovery and Business Continuity*, 11(3), pp. 977 -990.
24. Saikia, S., 2015. *Investment Pattern of Youth in India with particular reference to Mumbai*. Mumbai: R.A.P.C.C.E initiative .
25. Sayankar, D. V., Sonawane, D. M. & Joshi, P. M., 2021. A Study on Impact of Demographic Factors on Overconfidence Bias in Investment Decision Process. *International Journal of Management*, 12(5), pp. 64-71.
26. Sharma, A. J., 2016. Role of Behavioural Finance in the Financial Market. *International Journal of Business and Management Invention*, 5(1), pp. 1-5.
27. Sharma, A. & Kumar, A., 2019. A review paper on behavioral finance: study of emerging trends. *Qualitative Research in Financial Markets*, 12(2), pp. 137-157.
28. Shukla, S. & A, A., 2019. A Study on the Awareness and Perception of Cryptocurrency in Bangalore. *Indian Journal of Applied Research*, 9(4), pp. 15-24.
29. Singh, J. & Yadav, P., 2016. "A Study on the Factors Influencing Investors Decision in Investing in Equity Shares in Jaipur and Moradabad with Special Reference to Gender. *Amity Journal of Finance*, 1(1), pp. 117-130.

30. Sohail, A., Husssain, A. & Qurashi, Q. A., 2020. An Exploratory Study to Check the Impact of COVID-19 on Investment Decision of Individual Investors in Emerging Stock Market. *Electronic Research Journal of Social Sciences and Humanities* , 2(4), pp. 1-13 .
31. Yoshida, Y., 2010. Is this time different for Asia?: Evidence from stock Markets. *Discussion Paper*, 4(40), pp. 9-15.
32. Gadde, T. & Gupta, D. A., 2020. The study of Risk-Taking Ability among Young Investors. *Journal of Xi'an University of Architecture & Technology*, 12(6), pp. 508-515.
33. Gill, S., Khurshid, M. K., Mahmood, S. & Ali, A., 2018. Factors Effecting Investment Decision Making Behavior: The Mediating Role of Information Searches. *European Online Journal of Natural and Social Sciences*, 7(4), pp. 758-767 .
34. Giudici, G., Milne, A. & Vinogradov, D., 2020. Cryptocurrencies: market analysis and perspectives. *Journal of Industrial and Business Economics*, 47(1), p. 1–18.
35. Gurbaxani, A. & Gupte, R., 2021. A Study on the Impact of COVID- 19 on Investor Behaviour of Individuals in a Small Town in the State of Madhya Pradesh, India. *Australian Accounting, Business and Finance Journal*, 15(1), pp. 70-92.
36. Himanshu, Ritika, Mushir, N. & Suryavanshi, R., 2021. Impact of COVID -19 on portfolio allocation decisions of individual investors. *Journal of Public Affairs*, pp. 1-6.
37. Jani, S., 2018. *The Growth of Cryptocurrency in India: Its Challenges & Potential Impacts on Legislation*, vadodara: Research Gate.
38. Kakade, S., 2020. *Investment Perspectives of Young Professionals in India*, s.l.: Scribd.
39. Karkacier, A. & Ertaş, F. C., 2017. ndependent auditing effect on investment decisions of institutional investors. *Journal of Accounting and Management Information Systems* , 16(3), pp. 297-319.
40. Kaur, A., 2021. *Covid returns: Will stock market crash again in 2021?*. Available at: <https://www.businesstoday.in/markets/market-perspective/story/covid-returns-will-stock-market-crash-again-in-2021-293247-2021-04-12> [Accessed 12 april 2021].
41. Khan, D. S., Upadhyaya, D. C., Gautam, D. S. & Natu, D. P., 2020. A study on the impact of covid-19 on the investment pattern of investors with specific reference to traditional investment (real estate and gold) and market based financial products (equities) in mumbai. *European Journal of Molecular & Clinical Medicine*, 7(11), pp. 5644-5660.

42. Syed, Z. & Bansal, D. R., 2017. Do investors exhibit behavioral biases in investment decision making? A systematic review. *Qualitative Research in Financial Markets* , 10(5), pp. 00-00.
43. V.V, D. A. K. & P, S., 2019. A study on opportunities and challenges of cryptocurrency in india with special reference to bitcoin. - *International Journal of Research and Analytical Reviews*, 6(1), pp. 774-780.
44. Lusardi, A. (2019). Financial literacy and the need for financial education: evidence and implications. *Swiss Journal of Economics and Statistics*.
45. P., A. (2018). Financial Literacy and Financial Education in India: An Assessment. *International Research Journal of Commerce Arts and Science*, 9(3), 72-79.