

# अनुसन्धक



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# अनुसन्धक

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## Use of Cinema and Video Excerpts while Teaching a Foreign Language in the Post-Pandemic World

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### Abstract

Cinema is the most popular and entertaining way to get in touch with a new language. Many students who start learning a language do not take private classes; instead, they use online material to study and take straightforward exams. Online tools of study have proven to be effective. Learning through various online websites, YouTube channels, and other videos is indeed effective. There is more than a language that a learner can learn through videos and cinema, which can be an exciting way to indulge in cinema and find an effective way of learning and teaching. Many video channels are making exciting videos to help students learn a language with different approaches, which are as amusing as effective. There are online tools like MOOC and Duolingo, as well as some fun ways to show how learning a new language can be fun, not complex or tedious. This is also responsible for making students lean towards learning a new language. Many times, people hesitate to learn a new language as they think it will be hard and not something that one can do after a certain age. Many other similar notions already exist in society that discourage people from learning a new language. But the thinking is now changing, thanks to the availability of cinema and online video teaching materials. This paper will try to find if it can be effective to link cinema as a learning tool for teaching a foreign language or help new students get in touch with a foreign language in the post-pandemic world where even at the end of 2021, the situation of offline world teaching is not fully normalised. So, can cinema be a vital element in teaching a foreign language to students through online mode as well?

**Keywords:** MOOC, Duolingo, Video Channels, Foreign Language

### Introduction

In 2019, the world was hit by what is known as COVID-19. This was the turning point of the whole world's education system. The way that education is imparted has changed. Suddenly, the devices we use daily became essential ways of teaching and learning. There are improvements in the online servers and applications like Zoom, Google Meet, Cisco Webex, etc., in their overall connectivity and other enhancements. The growth of the online world and platforms is also causing many other known companies to launch and collaborate on their online platforms. (Li Cathy and Lalani Farah) The shift from an offline to an online world has been swift, and a new trend nowadays, called the "hybrid mode" of teaching, which includes the combination of online and offline education, is very common. Most universities and schools, whether private or government, use this teaching method. The teaching process is now different and unique in a way we never thought would come, and that too this soon. Also, institutions offer various programs and courses that are educative and free. In all these, video resources are essential in the online and hybrid worlds. As the momentum is shifting towards this new trend, there is also a rising need to accommodate this demand. People are now using online mode more than ever. As per many surveys, a student can acquire more resources in an online mode of study. Furthermore, learning a concept online takes a student less time than offline.<sup>1</sup> However, this new trend has yet to reach its full potential.<sup>2</sup> To understand what role video excerpts play in teaching a foreign language to an international student, we have divided this paper into **three parts**. Firstly, we will talk about how one can study language online; secondly, why we need video excerpts to be combined with this new trend; and thirdly, we will analyse its effectiveness.

## 1. Need for Video Excerpts

In this online world, without a board to write on, not having enough time, internet connectivity issues and other things considered, it can be said that there is never enough time to teach online. The video excerpts, exceptionally those available online for free, can be a perfect option for learning a new language at one's convenience. As it does not bind anyone to any schedule and does not ask them to devote a particular period, the learner is free to choose what they want to study, how much they want to study, and for how long.

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<sup>1</sup> Li Cathy and Lalani Farah. "The COVID-19 Pandemic Has Changed Education Forever. This Is How." *World Economic Forum*. N.p., 2020. *World Economic Forum*. Web.

<sup>2</sup> Ibid.



As we all know, learning a new language is not cheap; it is usually costly. All the courses the experts provide have schedules and fees which are not affordable for everyone. With time, as the scope of learning a new language grows, it becomes costlier. After COVID-19, online learning has opened a world of possibilities for students. There are numerous websites and companies which are providing interesting courses free of cost. All these organisations use one crucial tool: videos. Now, videos are a combination of all types of audio-visual resources. One can use infinite valuable tricks to get in touch with a language.

An app called Language Reactor can be used as a good stepping stone to get in touch with a language for starters who need to get familiar with the sounds of the new language. It acts as a subtitle of a video, which can be in the case of Netflix, Amazon Prime, and tons of other streaming websites, and can come in real handy. Other such apps or extensions are eJOY and Mate Translator. Also, an extension known as Dualsub can create dual subtitles at the same time.

Research has shown that spending around one hour watching foreign language content will be enough to improve the knowledge of the new language among the aspirants. These extensions and applications are an excellent way to get in touch with the new language. Taking advantage of this new online platform, if a person watches a foreign language web series or movies for a month, there can be substantial changes in his level of learning a new language. However, shows are more effective ways of learning than movies because movies are shorter than web series, and the vocabulary used may not always be easy. Watching web series can help a person get familiar with the essential and basic vocabulary, pronunciation, accents, and other important things without studying them. This can serve as an excellent basis to build the knowledge of a new language and develop an interest in learning it.<sup>3</sup> However, the same research shows that when an advanced learner uses these tools to study a language, it is far more effective, as he is already accustomed to many essential things a beginner can struggle to get.

We also see many applications that teach languages for almost free of cost. One prominent example is Duolingo. So, in today's world, people have immense resources to learn a new language, and videos are integral to all of them.

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<sup>3</sup> Agarwal, Shubham. "The Browser Apps That Teach You Languages While You Watch TV." *Vulture*, 1 Dec. 2021, <https://www.vulture.com/article/browser-apps-for-learning-foreign-languages.html>.

## 2. Need for Video Excerpts in Online Teaching

As we have learnt the importance of videos in the online world and how they invoke and improve the teaching and learning of foreign languages, one must ask: do we really need video excerpts in online teaching? The answer is yes, we do. In a report published in April 2020, almost 1.2 billion students from 186 countries were taking online classes. Nearly 65% of universities are offering online courses.<sup>4</sup> Videos as lectures make it easier for them to view the lecture. Almost all classes today use video materials to teach students online. The videos are very engaging, and students are more interested in learning when an audio-visual aspect is included in the studies. In addition to this, video lectures are also practical, and they tend to invoke critical thinking and enable students to analyse situations further.<sup>5</sup>

Furthermore, videos are an excellent source to add knowledge of the country, the language, and all the concepts that may be outside the scope of books. Books are there to teach the language theoretically, but videos can easily teach practical aspects of language and many video topics, which books alone cannot provide. Hence, they can be used to bolster and build on the knowledge that the student has on his subject, especially language. In other words, it also helps teachers to explore the world and choose the right tool to use in the class.

Also, a teacher can use videos in the classroom in many ways. An unending depth of online resources can be exploited in the way a person wants it to be. There are cultural aspects that a teacher can show to students, such as “Easy French,”<sup>6</sup> and for teaching students from the very beginning to the advanced level, we have a channel like “FrenchPod101”<sup>7</sup> and many others. Many different exercises and grammatical concepts are made accessible to French natives who have been teaching the language and its concepts online for a long time, for example, “Français avec Pierre”<sup>and</sup> “Learn French with Alexa”<sup>8</sup>. These are only a few examples practical for a new teacher, such as online resources and use in the class.

## 3. Effectiveness of Videos in Teaching

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<sup>4</sup> Online Education Statistics – How COVID-19 Changed the Way We Learn? *Admissionly*, 12 Apr. 2021, [https://admissionsly.com/online-education-statistics/#top\\_ankor](https://admissionsly.com/online-education-statistics/#top_ankor).

<sup>5</sup> Hanzic, Lucija Vita. “5 Top Benefits Of Using Video In Education.” *Covideo*, 24 Jan. 2019, <https://www.covideo.com/using-video-in-education-benefits/>.

<sup>6</sup> <https://www.youtube.com/c/EasyFrench>.

<sup>7</sup> <https://www.youtube.com/c/frenchpod101>.

<sup>8</sup> <https://www.youtube.com/c/learnfrenchwithalexa>.

As we know from the above description, the videos are effective in teaching students, as they feel more connected to cinema than books. Videos also focus on digital literacy, which helps teachers become the facilitators rather than the tools in the class. A better solution for engaging students is not to show full movies online but some short video excerpts for them to analyse. Also, videos are a perfect marketing tool. Short videos are compelling as they take less time and impart more knowledge.<sup>9</sup> While students watch a video of an exercise, they watch and learn more than they can with the book. In addition to this, videos can effectively teach a student a variety of domains, for example, race, caste, class, gender, and so much more. In a way that it can touch the aspects of society that a book cannot touch. (King)

With these confirmations, we can safely assume that videos give the edge in imparting practical knowledge to students, which is impossible by any other means. Learning about culture is an important aspect; for instance, we can think of cinema being used by sociology teachers to teach about marriage, culture, and other things, so not only teachers of foreign languages use this media, but different fields also benefit from videos.

## Conclusion

To sum up, videos are an excellent source of teaching a foreign language, as they enable us to dive into the limitless possibilities of the world of knowledge that is available at our fingertips. To use it more wisely in the teaching field is the discretion of a teacher, and there are infinite ways that videos can benefit teaching. As we have seen, it can improve student's cultural knowledge and solidify the other aspects for which a person learning a language will be necessitated to visit the country. The native speakers are making things to help the learners across the world to get a better hold of knowledge, a world of limitless possibilities. Furthermore, one can also learn the things that are most talked about and the things that are significantly less talked about. It's all there on the internet and in the form of audio-visual documents.

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## Learning Language Through Social Media - Issues and Concerns

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### Abstract

Language is a familiar aspect of our lives and a system through which we express our thoughts and feelings. It is a means of communication. The ICT revolution has extensively broadened the scope of communication by providing many avenues to facilitate communication at the global level. Today, most young graduates communicate through social media portals such as Twitter, Instagram, Snapchat, WhatsApp, Facebook, YouTube, etc. This advent of social media has affected the language learning patterns of the younger generation as it has given rise to the web- slang, jargon and short forms. This trend of social media texting habits may adversely affect their language learning. Today, the coronavirus pandemic scenario has imposed digital teaching modes at all levels. Social media came to the rescue and supported the teachers in staying connected with their students during these crucial moments. These channels facilitate educational communication in many institutions without infrastructural support for conducting full-fledged online classes. Some believe that this social media texting has enhanced their communication abilities. As all the students attended their sessions online through various social media portals, the researcher conducted a research study to determine the influence of social media texting on their language learning. As part of her ICSSR-sponsored significant research project, the researcher administered a questionnaire to 940 students pursuing their final year graduation in various disciplines in colleges affiliated with KSKV Kachchh University—the questions aimed to gather students' impressions regarding the impact of social media on their language learning. The descriptive statistics of frequency counts and percentages were used to analyse the demographic data, while inferential statistics of the Chi-square test were used to test the research hypotheses.

**Keywords:** social media, language learning, communicative abilities, texting habit interaction

### **Learning language through social media – Issues and Concerns**

The 21st-century smart graduates are expected to have proper communicative efficiency to excel in their performance in any field, including academics. The technology-driven, current-day knowledge society has turned the world into a global village. Today, most youngsters use social media networking sites like Facebook, Twitter, WhatsApp, Snapchat, Instagram and many more to interact with their friends physically or virtually. The emergence of social media has remarkably influenced students' communicative proficiency and exceptionally written communicative efficiency. The use of social media amongst the youth is significantly growing, and social media has become a popular means of communication and interaction with peers.

The present coronavirus pandemic scenario has changed the teaching-learning strategies. It has brought a drastic revolution in academics and compelled teachers to opt for virtual teaching mode instead of physical classroom teaching. Social media applications can effectively and efficiently share classroom teaching material with students. However, it is undeniable that young graduating students communicate freely and spontaneously while interacting with their friends and peer groups through these portals. They hardly bother drafting proper, correct messages while considering all the parameters of written communications. On the other hand, academics' current assessment and evaluation process emphasises written communicative abilities alone at higher levels of formal educational scenarios. However, today, most graduates do not have optimal communicative skills. Though they qualify per their academic record, some of them can't even give their introduction correctly. They hesitate to appear confidently in front of an interview panel. The employment solution company Aspiring Minds survey report revealed that poor communication and computer skills are the main lacunae hampering the educated engineering graduates' career prospects. So today, when knowledge and proficiency in English have become imperative to ensure success in any field, including academics, the ongoing communication revolution has provided many avenues to facilitate physical or virtual communication. The young netizens of this technology-driven 21st-century bright graduates are expected to have proper linguistic competence to withstand the increasing competition in the current world.

### **Process of Second Language Learning**

Language is a familiar feature of our life. It is a significant aspect of societal culture. It is a means of communication. There are two different forms of verbal and non-verbal communication. Verbal communication demands the systematic use of certain words, and non-verbal communication includes kinesics. Language is a skill subject, and learning is gaining knowledge or skill by study, experience or being taught. Unlike the mother tongue, the second language can't be acquired naturally and automatically. It has to be learnt deliberately by making strenuous efforts.

### **Social media**

Social media is emerging as a prominent platform to facilitate communication at the global level. In the current coronavirus pandemic scenario, social media tools help teachers stay connected with students through virtual mode. They are more exposed to social media and are influenced by it.

Social media has brought many new vistas and affected the preferred learning styles of young people in their language learning process. Facebook, WhatsApp, Twitter, Snapchat, and YouTube are popular tools that young graduates and college students use for social interactions. They momentarily text their messages, and the writing is associated with the texting. So, this social media interaction through texting is quite casual among college students. Most of them use YouTube to watch videos and to stream online. Now, even teachers use this channel even in educational settings. Some studies revealed that social media networking helps them to promote their communication skills. In contrast, others reported the detrimental effect of this social media use on students' sanctity in the English language. Academic language is formal, and this formality is missing in their social media texting. In academics, web slang, ungrammatical construction of sentences, and contracted and short forms are not accepted. The central aspect of academic assessment and evaluation gives maximum weightage to the benchmarking elements of written communication. Simple spelling mistakes and incorrect punctuation marks have adverse effects on their academic performance. So, there is no consensus regarding the influence of social media on students' communicative abilities.

### **The Effect of the Pandemic on the Educational Process**

The coronavirus pandemic has transformed the process of classroom teaching and interaction between the teacher and the students in educational institutions by suddenly imposing a shift in the process. As per the directed guidelines, all the colleges and universities were compelled

to adopt digital virtual classroom teaching practices. If the institution had proper infrastructural abilities to conduct online classes and if the teachers and students had the ability to participate confidently in the virtual classroom teaching sessions, this shift would have been welcomed by all the stakeholders. In that case, the online teaching-learning process has many advantages for students. However, the sudden imposition has brought attitudinal differences between the teachers and learners. The digital mode of learning has a significant impact as the students differ in their perception of the usage of the online teaching processes. Even teachers and students from rural backgrounds face difficulties as a result of a lack of infrastructural support and attitudinal differences between teachers and students. Some colleges provide technical support through MS Teams, and others have access to it through various social media portals. Many institutions allow their faculties to engage in classes through online social media portals. As there are heterogeneous groups in every college, most students already use their Android phones for social interactions among their groups. However, they interact freely and casually with friends and other social groups. However, they need to be more formal in their formal educational communication. So, the present paper attempts to look into the details of the influence of social media texting habits on their communication skills from their perspective.

### **Review of Literature**

Many studies examined the relationship between students' use of social media and its impact on their academic performance. Some studies substantiated that students' consistent use of social media networks may damage their genuine writing efficiency. Other studies found that this social media channel can enhance the communicative abilities of smart generation graduates.

Anika Belal (2014) conducted a study on 'the influence of digital social media in writing and speaking of tertiary level students', which confirmed that social media enhances students' writing and speaking skills. The study also revealed that the students unconsciously use short-form words, incorrect grammar, and sentence structure in their formal writing and speaking.

Quader (2014) found positive relations between the use of social networking and the student's academic performance. According to Asad (2012), students' academic learning outcomes could increase when their social learning outcomes are heightened. According to Herring (1996), chat takes place in the written medium (typing words on the keyboard and reading words on a screen). However, like spoken language, particularly unplanned speech, it generally consists of shorter, incomplete, grammatically simple, and often incorrect sentences. Anderson



(2008) says that ‘they exercise their mastery of communication norms and tools, some of which are not appropriate to an educational online context.’

Swan (2017) found that informal contractions might influence learners and apply them in their formal writing. It may hurt their grammar and spelling. Kasuma’s study (2017) revealed that social media introduced a variety of discourse functions and thus improved language abilities. Another Dhanya (2016) survey showed that diverse avenues brought through social media provided learners with opportunities to enhance their language skills. Derakshan and Hasanabbasi (2015) found that Facebook has dramatically impacted second language learning. Al Rahmi and Othman (2013) revealed that students become more interactive and engaged when social media tools are used in the classroom. However, Abbasova’s study (2016) found that although social media texting negatively affects students’ writing skills, it helps improve learners' vocabulary and literacy skills.

#### **Data Substantiates.....**

The National Employability Report by Aspiring Minds, an employability solutions company, revealed that inadequate English and computer skills are the key factors that make graduates unemployable. All jobs require high competence in cognitive skills and English. It was found that the higher the skill requirement for a job, the more significant the gap between employability. The mental skills remain the same. However, the most crucial difference between them is their communication skills in English. So, we cannot deny that “Poor English and computer Skills Make Graduates Unemployed” (Reema Nagarajan).

- NASSCOM data published in an article “Only 25% IT graduates readily employable: Nasscom” by The Economic Times justifies why big IT companies and organisations like NASSCOM say that only 25% of technical graduates are employable. What they mean is that most of them have not been able to communicate their skills and thought processes effectively because of a gap between industry and academia (Geetanjali Singh).

#### **Rationale**

As referred by the above report, the ongoing competition demands proper communicative proficiency, which requires at least an optimal level of knowledge. However, it is a known fact that many young graduates cannot express their thoughts clearly and in flawless English. Some of them, even after acquiring that academic qualification, did not have the confidence to give their self-introduction confidently and hesitated to appear before the selection committee or interview panel freely. The same youngsters spontaneously participate in social media interactions and actively generate written textual messages without caring for the benchmarking aspects of written communication informally. If it is constrained to their social groups and friends, it may be acceptable to them. But, if they continue the same tendency unknowingly in their formal academics, it will influence their academic standards. Considering this, the researcher had the objective of finding out if there is any association between students' social media texting habits and their influence on their communication skills. This article discusses the impact of social media on students' communication skills from a student's perspective.

### **Research questions**

- How does social media texting influence the students' communication students' skills?
- Is there any effect of students' social media texting trends on their academic performance?

### **Objectives of the Study**

- To know the students' opinions on their social media texting habits and its impact on their communication skills
- To know whether social media texting has any influence on students' formal writing skills or not.

### **Research Hypotheses**

The following hypotheses are formulated to validate the above objectives. empirically

#### **Hypotheses 1**

Ho: - There is no association between students' social media texting habit and their adoption of grammatical aspects while texting through social media.

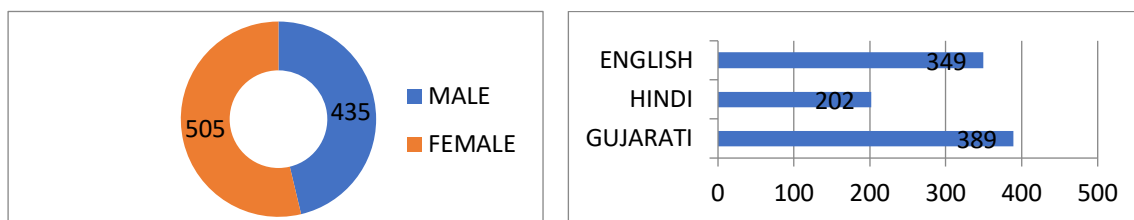
#### **Hypothesis 2**

Ho: - There is no association between students' social media texting tendency and their concern about framing correct sentences while texting through social media.

**Design of the study:** It is a descriptive survey.

**Population and Sample:** All the students pursuing their final year graduation in Arts Science, Commerce, Computer Science and Management disciplines from the selected ten colleges affiliated to study. University constituted the population of the study, and the sample of 940 students was considered through the convenience sampling method for this study. The sample included 435 (46%) boys and 505 (54%) girls. The sample consisted of students pursuing the final year of their BA, BSc, BCom, BBA or BCA programmes in different colleges. All the colleges were located in different places, like Adipur, Bhuj, Gandhidham, etc., in the district of Kachchh in Gujarat. The diagram shows that 389 students (41%) studied through the Gujarati medium of instruction at the school level. Another 349 students (37%) pursued their school education through English medium, and the remaining 202 (21%) opted for Hindi instruction at their school. These details are shown in the diagram shown below:

**Fig. No1 Gender Wise Distribution of Sample Fig.No2 Medium of Instruction at School**



### Research Tool

A structured questionnaire was prepared to gather information from the students. The questionnaire consisted of questions regarding respondents' demographic details and questions regarding the study theme, which elicited responses from the respondents.

### Data Collection

The researcher visited each college twice for this purpose, explained the purpose of the study, distributed the questionnaire to the students present, and shared the link through Google Forms. All the received responses were considered as samples through convenient random sampling.

## Data Analysis

Data collected as responses were analysed using the descriptive statistics of frequency counts and percentages and inferential statistics. The collected data is analysed using statistical tools like the mean and Chi-Square test. Chi-square tests the stated hypothetical statements at 0.05 and 0.01 significance levels.

## Interpretation

While attempting to answer the question about using social media texting habits, 744 students said they use social media to communicate amongst social groups. The remaining 196 students responded in negation.

While attempting to question the significant portals they prefer to use for their communication, most respondents preferred WhatsApp, followed by Google, Instagram, YouTube, Snapchat, Facebook, and Twitter. The details are given in the table below.

Table 1: Use of Social Media Portals

Which social media portal do you generally use?	Responses	Preference
WhatsApp	657	1
GOOGLE	469	2
Instagram	458	3
YouTube	397	4
Snapchat	287	5
Facebook	146	6
Twitter	11	7

In the following question, students were asked to mention whether they believe that social media networking promotes their communication skills; 676 students responded affirmatively and reported that they think that social media communication improves their communicative abilities, and the remaining 264 responded in negation. The data is shown in the tabular form below:

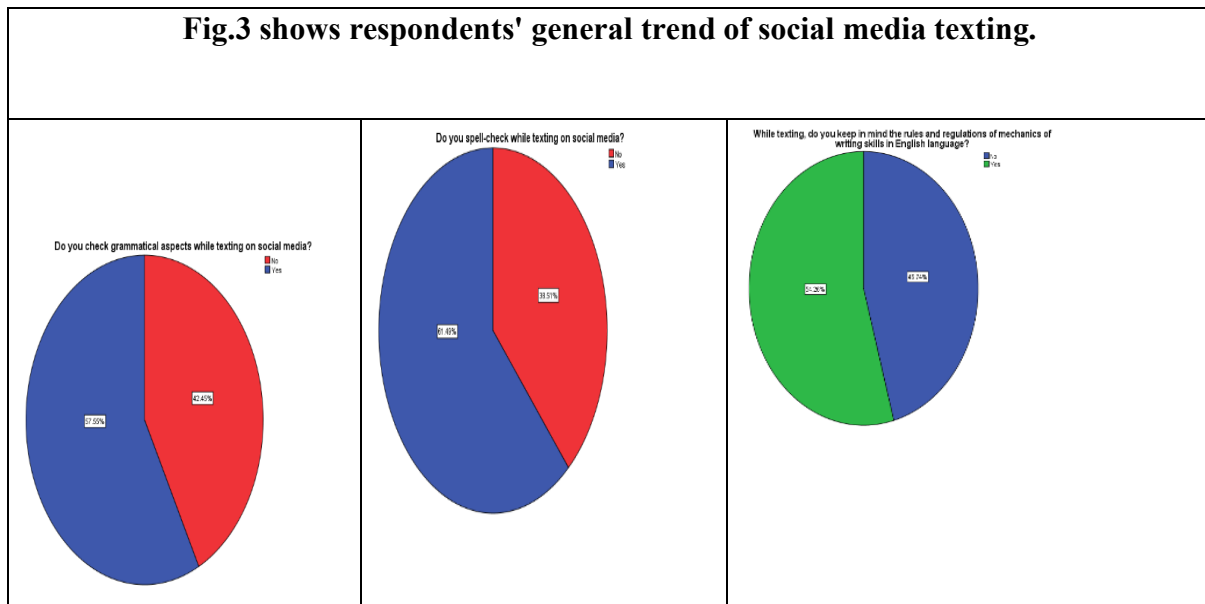
**Table 2: Perception of Students on Skill enhancement through social media**

Responses	No of Respondents & Percentage
YES	676 (72%)
NO	264 (28%)

On being asked about their general tendency while texting through social media amongst their social groups on various aspects, such as their habit of checking grammatical aspects, spelling mistakes, usage of acronyms and short forms, etc., 58% of them reported that they do check grammatical aspects while framing their message. The remaining 42% of them responded negatively. Furthermore, 61% of them mentioned verifying word spellings, while the remaining 39% responded in negation. While attempting another question on choosing the correct and appropriate words, 73% replied that they care while using proper words. Still, the remaining 27% said they don't bother about these aspects. While responding to an item on the use of acronyms, 76% replied in affirmation, while the remaining 24% of responded in negation. While attempting yet another question on whether they adopt all the benchmarking aspects of written communication in their texting, 54% of them replied that they keep all the required aspects of written communication in mind. In comparison, the remaining 46% of them reported casually drafting the message without caring about the needed aspects of written communication. The details are shown in the table and diagram given below:

**Table 3 Showing General Tendency of Students While Texting**

Responses	Proper Grammatical Construction of Sentences	Spelling Checking	Careful Usage of Words	Use of Acronyms	Adopting Benchmarking Aspects
Positive (Yes)	541(58%)	578(61%)	685(73%)	711(76%)	510(54%)
Negative (No)	399(42%)	362(39%)	255(27%)	229(24%)	430(46%)
Total	940(100%)	940(100%)	940(100%)	940(100%)	940(100%)



While attempting a question on whether they believe that there is any relation between their social media texting skill and their formal academic writing skills, 585 respondents (62%) mentioned that there is some association between students' social media texting habits and the remaining 38% believed that their social media texting habit does not influence their formal academic standards. The details are shown in the following:

**Table 4 Students' Perception on Influence of Social Media Texting on Formal Academic Writing Skill.**

Options	Frequenc y	Per cent
No	355	37.8
Yes	585	62.2
Total	940	100.0

### Hypotheses Testing

Ho: - There is no association between students' social media texting habit and their adoption of grammatical aspects while texting through social media.

H1: - There is an association between students' social media texting trend and their adoption of grammatical aspects while texting on social media.

**Table 5 shows Students 'Social media Usage**

Options	Observed N	Percentage
YES	744	85.9574
NO	196	14.0425
Total	940	

58% of the student respondents replied that they take care of grammatical aspects while texting through social media channels, and the remaining 42 mentioned that they don't bother with grammatical aspects while texting their messages instantly.

	q11usingsm	Concern for Grammar
Chi-Square	319.472 <sup>a</sup>	21.451 <sup>a</sup>
df	1	1
Asymp. Sig	.000	.000

As the significant value of Chi-square is 0.000, which is lower than 0.05, HO is rejected that there is no association between students' social media texting trend and their concern for grammatical aspects while texting on social media.

## Hypothesis 2

Ho: There is no association between students' social media texting tendency and their concern for careful word usage to frame correct sentences while texting through social media.

H1:- There is an association between students' social media texting trend and their concern for carefully using words to frame correct sentences while chatting through social media.

**Table 7 Data of social media Users**

Options	Observed N	Percentage
YES	744	85.9574
NO	196	14.0425
Total	940	

**Table 8 Students perception regarding careful use of words**

Responses	Observed N	Percentage
1.00	685	72.8723
2.00	255	27.1276
Total	940	

**Table 9 Chi-square Results**

	q1 lusingm	Careful Usage of Words
Chi-Square	319.472 <sup>a</sup>	196.702 <sup>a</sup>
df	1	1
Asymp. Sig.	.000	.000

As the significant value of Chi-square is 0.000, which is lower than 0.05, HO is rejected here. There is no association between students' social media texting trend and their concern for careful word usage to frame sentences correctly while chatting through social media.

### Major Findings

Students' exposure to social media networks significantly influences their academic performance. It has been revealed that students are addicted to social media networking and interact freely and spontaneously without thinking about the required benchmarking aspects of their communication. They sometimes adopt the same non-standard language, which is not accepted in academics informally. The study revealed that 42 % of them are hardly bothered



by their grammatical construction. Another 46% reported not considering any benchmarking aspects required in their social media texting. The Chi-Square test results also proved that their casual texting is framed without caring for the quality aspects of written communication.

### **Conclusions**

Students use web slang /internet slang, which refers to a different form of communication from the general standard. It is widespread in social media interaction as it is more effortless, instantaneous, short and time-saving. However, as representatives of the innovative generation, current graduates are expected to have adequate communicative proficiency, and this online process provides them an opportunity to enhance their communicative efficiency. The online portals have made communication easy, effective, and efficient. If they wish to improve their communicative proficiency, they are exposed to new ways and means of self-learning through various technology-enabled apps and tools like Pinterest, Edmodo, etc. However, they use non-standard English words and jargon while texting their responses instantly without caring for the standards.

If assessed and evaluated properly per the academic communication standards, these messages are full of wrong grammatical constructions framed without taking care of the spelling, punctuation, capitalization marks, etc. They informally draft the message carelessly and casually without concern about the benchmarking aspects of written communication. This tendency to draft instant messages without proper thinking may lead to similar mistakes in their formal academic writing. They tend to leave some letters from a word and create short forms and acronyms like OMG (Oh My God) and FYI (For Your Information). These jargon and short forms are not acceptable in academics.

This study particularly focuses on identifying the writing patterns of youngsters in their social media texting practice and the influence of this writing trend on their academic performance.

The use of social media has a significant impact on their writing skills. This has both positive and negative influences. On the positive side, students are exposed to new words from those textual comments. It helps them to write in a better way if they make conscious efforts to learn. In addition to this writing, they can learn other language skills by watching and reading online sources and materials. They can enhance their oral communication skills by participating in video conferencing. Above all, they can drive away their psychological phobia and hesitation in their regular participation with ease. However, if the same casual attitude is continued in

their formal writing unknowingly, it may adversely affect their academic performance. These jargon, internet slang, and contracted forms, standard features of their belongings, are unacceptable by educational standards.

### Recommendations

Students should be educated about the influence of social media on their academic performance.

Teachers should monitor the students and guide them to use appropriate apps, particularly those created for self-learning.

Teachers should help students understand that social media can become an efficient tool for learning English if appropriately utilised.

Students should realise the difference between formal communication and informal chatting.

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## Trauma and Catharsis in Kipling's The Jungle Book

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### Abstract

Literature is as much a lived expression of life as it is a microcosm of life itself. Literature in all its forms– the oral, the written, the illustrated and the enacted– has always been an expression of life. The pre-historic man drew to document life. The onset of civilisation meant the advent of language. As human civilisation advanced, it saw the development of written language, and when it reached the acme of its perfection, it took the form of literature.

One of the primary ways the human spirit manifests itself in literature is by using literature as a springboard to express what has remained suppressed/ repressed. The present paper explores the life and work of one of English literature's most prolific, decorated and, at the same time, much-maligned author, Sir Rudyard Kipling. The extremes of love and hatred that Kipling has evoked through the ages stand testimony to an extraordinary life. Rudyard Kipling belonged to two worlds- a world he was born into and one he had lived in. Kipling's life was strangely enriching as well as conflicted life. Nature and nurture were at war in his personality and life; his writings were a personal journal. Unconsciously, his writings became a means of release and healing for him. This is especially true for his later works. This paper seeks to study this trauma and cathartic release in Kipling's work with special reference to The Jungle Books. The present paper attempts to read The Jungle Books as the cathartic expression of release and healing by a compassionate and much-maligned author. The paper seeks to go back to the conception and realisation of The Jungle Books and the character of Mowgli himself, trying to locate in it the deep personal history that the populist, colonial readings of Kipling have often overshadowed.

**Keywords:** Trauma, Catharsis, literature, Kipling, The Jungle Book

The Appeal

“And for the little, little span  
The dead are borne in mind  
Seek not to question other than  
The books I leave behind.”

Rudyard Kipling

With this appeal, the present paper tries to dive into the life and mind of one of the most prodigious, maligned, and politically tricky writers, Joseph Rudyard Kipling. The paper begins with a snippet from one of the lesser-known of Kipling’s poems, which stands in defence of this controversial and very private writer who has seen tidal waves of admiration and abomination in his lifetime and beyond. Literature is as much a lived expression of life as it is a microcosm of life itself. Literature in all its forms – the oral, the written, the illustrated and the enacted has always been an expression of life. Pre-historic man drew to represent life; the onset of civilisation meant the advent of language. As human civilisation advanced further, the written language was developed. When this written language reached its perfection, it took the form of literature.

One of the primary ways the human spirit manifests itself in literature is by using literature as a springboard to express what has remained suppressed/repressed. The present paper seeks to explore the life and works of one of literature’s most prolific and decorated authors, Sir Rudyard Kipling, who is, at the same time, a much-maligned author. Kipling belonged to two worlds—one he was born into and one he had lived in. Kipling had a strangely enriched and conflicting experience of life. Nature and Nurture were at war in his personality as in his life. Literature for Kipling began as a journalistic endeavour, and its journalistic principles were to remain at the core of Kipling’s writings. However, this literature was a journalistic depiction of a troubled life at some difficult junctures, though Kipling’s art kept this documentation well disguised. The present paper proposes to read the Mowgli stories of Kipling’s “The Jungle Books” as a disguised journalistic depiction of the author's troubled life as he tried to make sense of a world where his heart and mind led him in two different directions. The present paper proposes to read the autobiographical elements in the character of Mowgli, looking at it through a psychoanalytical angle and trying to go back to the conception and development of this character while co-relating it with Kipling’s mental turmoil as he negotiated life. This

present paper attempts to locate in the Mowgli stories of “The Jungle Books” the deep personal history overlooked and foreshadowed by the more populist colonial readings of Kipling.

Rudyard Kipling was born to immigrant British parents, John Lockwood Kipling and Alice Kipling, in December of 1865 in erstwhile Bombay. John Lockwood Kipling was the first dean of the JJ School of Art, Bombay and the Kipling family lived on campus. Kipling was to memorialise the city of his birth in the poem “Dedication: To the City of Bombay”, where Kipling proudly says,

“Neither by service nor fee  
Come I to mine estate—  
For I was born in her gate,  
Between the Palms and the sea,  
Where the world-end steamers wait.”

Kipling was to describe his childhood further, a very short, distinctly Indian childhood that was cruelly cut short in words that emanate the magic and wonder that must be the essence of childhood. Kipling describes the surroundings of his house in his autobiography, saying, “Far across green spaces round the house was a marvellous place filled with smells of paints and oils and lumps of clay with which I played”. While the original house crumbled away, the “Kipling House” structure, which came up adjacent to the original bungalow, was constructed in 1882, almost a decade after Kipling left for England. It is only a metal plaque and a bust of the author standing outside the dilapidated bungalow that speaks to the visitors today of the man who once lived there and gave the place its name.

Rudyard Kipling was sent “home” to England at the tender age of six, in the care of foster parents, to be raised as an Englishman by parents who could see the strong Indian imprint that their highly impressionable boy was showing. As Kipling mentions in his autobiography, “Something of Myself”, he was more likely to speak in the vernacular than English and was often reprimanded for it. Kipling’s short, idyllic, magical childhood was the only anchor of a life that took a cruel turn when he was sent “home” to England in foster care. Kipling was to return to India as a nineteen-year-old, and India was once again to become his professional training ground. It proved to be the launch pad for the immense success that established him in the firmament of the great writers of the empire.

Kipling's connection with India kept coming up throughout his life. He was to famously exclaim, "There are only two places in the world where I want to live, Bombay and Brattleboro. And I cannot live in either". Interestingly, neither Bombay nor Brattleboro was what Kipling's ancestors, or Kipling's parents, had called 'home', but both were home to Kipling. Bombay was home because it held the relics of a few precious childhoods snatched too soon, and Brattleboro perhaps because of its raw, wild quality, which allowed for moulding according to one's taste. One is wont to believe that it was no coincidence that Kipling built a sprawling Indian-style bungalow in Brattleboro for himself and named it Naulakha, which in vernacular Hindi means an expensive jewel. As much as its conception, the name speaks for the Indian heart of the British man who built it, Kipling himself. Naulakha was Kipling's Indian refuge in wild, untamed America, a piece of land he was working hard to reclaim, a life he could not publicly speak about.

"The Jungle Books" has been variously and widely read in several different themes. One of the most popular readings of the "The Jungle Book" has been its post-colonial reading as a narrative of the Empire. Mowgli has been seen as the advocate of the British Empire, the law of the jungle as the sacred laws of the Empire, meant to uphold the hierarchy on which the Empire stands. However, what most critical readings of Kipling have missed, especially about the Mowgli stories of "The Jungle Books", is the profoundly personal element that lies deep within its structure. Where critics have read in "Kim" specific autobiographical notes, Mowgli has largely been ignored in this respect. The present paper attempts to read the character of Mowgli as the alter-ego to Kipling's Kim. Where Kim is all fun, adventure and banter in the kaleidoscope of India's settings, Mowgli is dark, menacing and traumatised as he oscillates between the jungle and the village. The present paper attempts to read the conflicted history of Rudyard Kipling's life in the Mowgli stories as he found himself torn between nature and nurture. Though Kipling was never to find that balance between what his heart desired and where his mind led him, his literary counterpart, the carefully camouflaged Mowgli, was to face those dilemmas that a young Kipling faced. Unlike Kipling's real life, the literary shadow figure of Mowgli attains a sense of equilibrium, a place of contentment, a sense of belonging as he settles on the edge of the forest that was home to his childhood and the male village that was the home he had been born into.

"The Jungle Book" is not only a carefully camouflaged representation of the Empire as it has been read, but also the story of the man Kipling himself as he found himself caught in the spotlight of the empire, the role of its spokesperson almost thrust on him. Mowgli, the wolf



boy, and young Ruddy, the British boy with uncanny Indian features, share the same psychological and ideological battles. As he finds himself torn between the Jungle and the man village, Mowgli's despairing cry says, "*As Mang flies between the beasts and birds, so fly I between the village and jungle. Why?...I am two Mowglies*". Kipling was to later write "The Two-sided Man" in "Kim", saying, "Much I owe to the lands that grew—More to the lives that fed-/ But most to Allah who gave me two / Separate sides to my head...I would go without shirt or shoe,/ Friend, tobacco or bread,/ Sooner than lose for a minute the two/ Separate sides of my head!" Where Kipling, in the two-sided man, was expressing the sense of a mental equilibrium which he sadly lacked in the physical space, Mowgli in "The Jungle Books" was describing the troubled inner journey of the mind which led to this final acceptance and growth.

The Mowgli stories in "The Jungle Books" are both an expression of the great love that Kipling had for the country of his birth and, more importantly, for chronicling the mental conflicts of Kipling himself as he straddled two worlds, longing to belong and finding himself an outcast. Much like Kipling himself, Mowgli faced a crisis of existence quite early in life- an existential crisis of identity. Just like Kipling's short-lived idyllic childhood, Mowgli too has a brief stint with the wolf pack, running with them as a brother, learning the law of the jungle that has been a home to him for all the years that he can remember, only to be told that hat he, a man-cub, belongs to the man-village, and there it is that he must seek a home for himself. There is more than a passing resemblance between Mowgli's dilemma and Kipling's life. Mowgli, we see, is almost pushed out of the jungle by the very wolves with whom he had once claimed kinship. Unfortunately, Mowgli has to use the fire he brought from the man-village in self-defence against the young wolves of the jungle, who deny the kinship that an older generation had accorded to Mowgli. In a very critical moment in the story "Mowgli's Brothers", we are told how,

"Mowgli stood upright, the fire pot in his hands. Then he stretched out his arms and yawned in the face of the council, but he was furious with rage and sorrow, for, wolf-like, the wolves had never told how they hated him. "Listen to you!" he cried. "There is no need for this dog's jabber. Ye have told me so often that I am a man (though indeed I would have been a wolf with you to my life's end) that I feel your words are true. So I do not call ye my brothers any more, but sag(dogs), as a man should." (Kipling 16)

In this poignant passage, where we are given a glimpse into Mowgli's inner life, we see the extreme pain and anguish with which he starts moving towards the search for an authentic

identity. What remains unsaid in the passage above is more important than what is said. It is a fundamental crisis of existence that Mowgli faces as he stands on the brink of manhood, outcasted from the home he knew and pushed towards a 'home' that he does not know but where he belongs because of the accident of birth. How the new generation of wolves turns against Mowgli, betraying the trust that an older generation had bestowed on him, is symbolic of Kipling's fears, had he, like Mowgli, sought a home and kin in India, the beloved country of his birth. Mowgli's inner voice saying, "I would have been a wolf with you to my life's end", is a pointer to inner turmoil as he must stand and protect himself from those very wolves with whom he had claimed kinship. One is wont to believe that in Mowgli's confrontation with the wolves, Kipling was projecting a part of his fears had he forayed too far into his Indian self. It is essential to mention here that just like the young Ruddy, the adult Rudyard, too, was fascinated by the Indian way of life, and his journalism gave him more than one opportunity to delve into the native's life. Moreover, the insomniac Kipling was known to explore the city of Lahore on many sleepless nights, as many of his short stories would testify to this.

In the Mowgli stories, we see a constant reverberation ringing throughout, "Man must return to man". It is as if Mowgli's destiny is pre-decided. Raksha, Akela, Baloo, and Bagheera all know that Mowgli must return to the man village one day. From the time that a young Mowgli roamed the jungle, believing himself a wolf, the wise ones of the jungle knew that he must return one day to the man village, just as a young Kipling soaked in the colours and stories of India oblivious to the fact that he would soon have to leave it for another 'home' across the seas, the home of his ancestors. In the Mowgli stories, we constantly see Mowgli's conflict as he tries to figure out who he is and where he belongs. While the wolves' treacherous revolt against him has made him wary of them, he cannot trust men either. In the Song of Mowgli, we once again see Mowgli's great grief as he sings,

"...The Man Pack are angry. They throw stones and talk children's talk. My mouth is bleeding. Let me run away. /Through the night and hot night, run swiftly with me, my brothers. We will leave the lights of the village and go to the low moon waters of Waingunga; the Man-Pack have cast me out. I did them no harm, but they were afraid of me. Why? Wolf Pack, ye have cast me out, too. The jungle is shut to me, and the village gates are shut. Why?... My mouth is cut and wounded with the stones from the village, but my heart is very light because I have come back to the jungle. Why?... My heart is heavy with the things that I do not understand."(Kipling 61).

In the quote above, one can sense the distinct voice of the highly private and sensitive Kipling as he traversed the two sides of his head. Although Kipling could never claim his “jungle” (India), Mowgli does so! In the conclusion of the Mowgli stories, “In the Rukh”, which also happens to be the first story which brought to life the character of Mowgli, we see Mowgli enlisted in the services of the Raj and living on the edge of the forest, away from the man-village. Mowgli’s spatial location symbolises the equilibrium he has achieved in his mental space. To see Mowgli’s children play with wolf cubs is a symbolic, cathartic end to Mowgli’s story, as he finally claims a neutral space that belongs neither to the wolf pack nor the man pack but is a harmonious meeting ground for them all.

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## Trauma and Healing: Resurgence of Self in the Autobiographies of Maya Angelou

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### Abstract

The present article explores how Maya Angelou endured multiple traumas—emotional, psychological, racial and cultural particularly from her Autobiographies *I Know Why the Caged Birds Sings*, *Gather Together in My Name*, *Singin’*, *Swingin’* and *Gettin’ Merry Like Christmas* and how she has received healing from the adverse effects of multiple traumas and achieved self-realisation. Maya Angelou, an African American writer, shares many traumatic experiences that are common to the black community settled in America besides having her own specific traumatic experiences. This paper focuses on the traumatic experiences of Maya Angelou and how she helped herself to heal her past angst and trauma. Maya Angelou, an African American woman caged by her traumatic experiences from childhood, emerges as a phenomenal woman harbouring no vengeance and detestation towards those who oppressed and inflicted pain on her, eliciting curiosity in the reader. Having overcome all the odds in life and the negative emotions and sense of worthlessness the trauma generated in her, Angelou emerged like a Phoenix that rose from its ashes. Her autobiographies can be called the epitome of script therapy. Scriptotherapy is healing through writing down one’s traumatic experience and pain. Maya Angelou recorded her works in autobiographies, which brought her complete healing. On analysing Angelou’s life, it becomes evident that her wounded and bruised self was healed completely through catharsis, which led to self-discovery and self-actualization. Angelou, a confident and cheerful black woman who is proud of her Negro lineage and physical appearance, has commanded respect and acceptance from people all over the world. Maya Angelou’s life mirrors the experiences of women and black women in particular, as her journey is symbolic of agony experienced in the twentieth century by women of different races.

**Keywords:** Memory, Trauma, Catharsis, Displacement, Repression, Alienation, Scriptotherapy

Maya Angelou was one of the prominent black women writers who challenged through her writings the racial and patriarchal society that oppressed blacks and made them feel inferior and ashamed of their black colour. Her writings brought a new genre of expression, autobiographical fiction, centred on black women's lives and how they were impacted by a more comprehensive social and political system. Angelou's first work, *I Know Why the Caged Bird Sings*, is a tool in the fight for equality. It portrays dreadful traumatic experiences that overshadowed her childhood and her struggles to cope with challenging situations. Despite oppression, she cherishes the richness of African American culture, family values, warm social and community life, and economic and political life, depicted vividly in her works.

This research paper posits that suffering cannot defeat an individual; a superior personality will emerge due to suffering and endurance. Elliott, Jeffrey, in "Maya Angelou: In Search of Self." quotes Angelou's powerful words: "We may encounter many defeats, but we must not be defeated. ...I believe that a diamond results from extreme pressure and time. Less time is crystal. Less than that is coal. Less than that is fossilised leaves. Less than that, it's just plain dirt"(694). This study aims at infusing fresh life into the battered and bruised souls who are inextricably caught up in the labyrinth of traumatic experiences by citing how a total resurgence of one's self can be accomplished without any trace of hatred or vengeance against the perpetrators through a deep study of the life and works of Maya Angelou, an African American author who attained an incredible degree of self-actualisation despite enduring unutterable assaults on her Self. An exploration into the select autobiographies of the said author *I Know Why the Caged Bird Sings*, *Gather Together in My Name*, *Singin' and Swingin' and Gettin' Merry Like Christmas*, which lay bare the traumatic experiences she has undergone as a black displaced child, a lonely teenager and an unwed mother. This study attempts to analyse the factors that have contributed to the evolution of Angelou's self.

Many factors shape the 'self' of an individual during the different phases of one's growth. Maya Angelou's autobiographies, especially *The Caged Bird*, bear testimony to the multilayered trauma Maya Angelou underwent in the process of growing up in a segregated South as a Black girl who struggled against the triple institution of classism, racism and sexism. Angelou's summation in this regard is significant. She observes:



The Black female is assaulted in her tender years by all those common forces of nature at the same time that she is caught in that tripartite crossfire of masculine prejudice, white illogical hate and Black lack of power (CB 272).

Multiple traumas experienced by Maya Angelou began at the tender age of three when she faced the stark reality of the separation from her parents. *I Know Why the Caged Bird Sings*, her first memoir, records poignantly the agony of separation, subsequent displacement and associated painful experiences that parade her life. Maya confidently “reaches back in memory to pull out painful times” throughout her narratives” (Braxton 23). After her parents had decided to “put an end to their calamitous marriage” (CB 5), her father took her. Her brother Bailey, aged three and four respectively, from their mother, put identification and destination tags on their wrists with a general instruction, “To Whom It May Concern” (CB 5). She sends them unescorted by train to Mrs. Henderson, their paternal grandmother in the South. The journey to a segregated Southern state, Stamps Arkansas, all by themselves without any adult supervision is a harrowing experience for these toddlers. While travelling all by themselves through strange lands, hungry, thirsty and confused, their little hearts are filled with extreme fear and sadness. However, as young children, they cannot comprehend the emotional and psychological ramifications of the whole rigmarole. The sense of insecurity and fear imprinted on their minds during this traumatic journey is explicit when she says:

A porter had been charged with our welfare – he got off the train the next day in Arizona –and our tickets were pinned to my brother’s inside coat pocket.... Negro passengers, who always travelled with loaded lunch boxes felt sorry for “the poor little motherless darlings” and plied us with cold fried chicken and potato salad (CB5).

This incident unsettles Maya and creates negative emotions of fear, insecurity, rejection, and helplessness. For years, Maya says, she thought what her parents had done was a cruel act, but then she discovered that she and Bailey were just part of a multitude of black children whose parents would take them out of the segregated South with the hope that things would

turn out better for them. To their disappointment, when they realise it is not always so, the parents send the children back to the South to their grandparents while their parents wrestle and struggle to improve their living conditions. Therefore, one constant threat faced by enslaved African American families is the perpetual likelihood of parting with one or more members. Enslaver's affluence lay mainly in the number of enslaved people he owned, and he enjoyed frequent selling and purchasing of enslaved people. A whole host of situations brought about sales. An enslaved person could be a part of an estate, and when the owner died, he would be sold along with the estate. A slave family may be split when the father is sold away, leaving behind the mother and children or as part of the inheritance, the slave families may be divided. Though the slave families were adversely affected or broken by these decisions, they had no say in the matter at all. While narrating this personal traumatic incident, Angelou recalls the broader spectrum by inviting the readers' attention to the role of the economy in deciding the family structure of blacks:

Years later, I discovered that the United States had crossed thousands of times by frightened Black children travelling alone to their newly affluent parents in Northern cities or back to grandmothers in Southern towns when the urban North reneged on its economic promises (CB 5).

Adult slaves of the family knew the possibility of sale, and the fear of separation haunted them constantly. Children are innocently unaware of the potential but experience the sting of such separations sooner. They are ferried across to segregated areas like Arkansas, where their grandmothers lived, or they are sold as enslaved people, upsetting the domestic fabric of Black families. As a sharp critique of slave oppression, Harriet Beecher Stowe, a white northern abolitionist, used the theme of family disintegration in her novel 'Uncle Tom's Cabin'. Frederick Douglass openly wrote in his book 'Narrative of the Life of Frederick Douglass, an American Slave' that his mother, who lived and worked miles away, trudged that distance every day to see him late at night as he lived with his grandmother. He never knew who his father was, although the rumour said it was his enslaver. An obligation to serve the owner takes precedence over family and children. Both Douglass and Stowe maintained vehemently that it was morally wrong to indulge in the slave trade and that the devastation of families was one of the severe fallouts of it. The displacement experienced becomes double-layered for the children as they are dislocated from home and their parents and alienated due to racial oppression. Angelou draws the attention of the readers to the insecurity, instability,

fear and loneliness the Black children experienced by their separation from their families. As told to Marcia Ann Gillespie, Angelou lets the readers see that knowing the different layers of African American experiences is critical to comprehending her childhood and that of African American families. As an aftermath of this incident, trepidation and diffidence haunted Maya and Bailey for a long time as children who were abandoned by their parents at a tender age when they had to be loved and protected. McPherson (1999) posits that Angelou offers essential insights into “the effects of social conditioning on the mind and emotions of a black child growing up in a hostile environment- an imprisoning environment” (24). In the first volume of her autobiography, *I Know Why the Caged Bird Sings*, Maya Angelou stresses the displacement experienced as the worst loss she faced in her childhood and that she has never wholly regained a sense of security and belonging.

Angelou’s autobiography can be called an example of script therapy, too. Scriptotherapy is healing through writing down one’s traumatic experience and pain. Though the scripture reading and the subsequent self-discovery have offered healing to Maya Angelou, recording them in autobiographies has brought her complete healing. On analysing Angelou’s life, it becomes evident that her wounded and bruised self was healed completely through catharsis, which led to self-discovery and self-actualisation. Maya Angelou was introduced in the opening chapter of *Caged Bird* as a self-conscious, frightened, insecure and shy child who could not recite her poem in the church. But she has come a long way through trudging through a thorny path to the stature of a ‘phenomenal woman’, a confident and cheerful person who is proud of her Negro lineage and physical appearance and commands respect and acceptance from people all over the world. Maya Angelou’s life mirrors the experiences of women and black women in particular, as her journey is symbolic of agony experienced in the twentieth century by women of different races. Getting rid of negative thoughts through emotional and psychological healing may empower an individual, and Angelou’s life bears testimony to the power of emotional and spiritual healing. Scriptures can be an agent of reformation of one’s self. On judging oneself as inadequate, flawed, unworthy, or undeserving of all the blessings a life can bring, one can block the innate wisdom that flows naturally through heart and soul by being connected to the Absolute. Catharsis, mainly through reading and reflection of scriptures and prayer, is a process of purgation which facilitates the removal of emotions that are in excess in one and brings about self-realisation, which in turn leads to the resurgence of one’s self. Thus, the emotional and psychological

catharsis gained through sharpening one's spiritual intelligence becomes the launch pad to one's self – self-actualisation.

To conclude, the fundamental building blocks for the resurgence of self for those who are windswept by trauma are identifying the negative emotions that rule their life in the light of scriptures or similar reading and eliminating them through the process of catharsis. People who are drawn towards negative emotions or are unable to reconcile with the expectations and the challenges emanating from these expectations may go through this journey of self-actualisation with difficulties. Still, it is an effort towards getting healed.

Having received emotional and psychological healing akin to a wounded and bleeding bird in a cage, Maya Angelou can now liberate herself and soar high in the sky of freedom, singing melodies full throat. The resurgence of her Self filled her with new vigour, a spirit of industry, courage and self-confidence, and she is now poised to capture all the opportunities by exploring her talents and potential to the best of her abilities with spiritual Intelligence as her most important resource. This has put her on the magnificent avenue of self-actualisation, a continuous process. As one proceeds towards self-actualisation, more avenues to be explored will be opened. Maya Angelou says in *Wouldn't Take Nothing for My Journey*: "The idyllic condition cannot be arrived at and held on to eternally. It is in the search itself that one finds the ecstasy."(73) As the Bible says, 'the seeds have fallen on fertile soil'. Though the seeds were crushed and choked by the thorns of the world's cares, Maya guarded these seeds, and in due course of time, they bore fruit and yielded thirty, sixty and hundredfold (Mathew 13 .18-23). Her resurgence is akin to a phoenix in Greek mythology that arose to a new life from the ashes of its predecessor.

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## Hybrid Workplace: “Employees’ Perception Towards the Future Workplace”

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### Abstract

The COVID-19 pandemic has affected every phase of life and every sector of the world economy. While the pandemic has created catastrophe on one side, on the other, it has also furnished the world with a whole lot of opportunities and new doors to open. One such opportunity is the “**Hybrid Work Model.**” As companies and businesses worldwide are slowly returning to work, some corporates are planning to discover the suitability of a hybrid or blended workplace. Although the education sector has previously adopted the blended learning mode, it is worth experimenting with the same model in Indian workplaces. This paper is such a new door to look into the model of hybrid working suitability in Indian Companies and the perspective of Indian employees in adopting this model. The main objective of this research is to analyse how the employees have experienced Work from Home (WFH), which was introduced recently due to the pandemic, and how they look forward to a more secure workplace atmosphere that provides them flexibility in the future. This survey-based study will be conducted on Indian employees from all sectors to identify if the employees support blended working and how significant the impact of the employees’ perception towards this work model is.

The study also aims to analyze statistically how the employees' demographics and past experience of virtual working influence their attitude towards the hybrid workplace model. The findings of the study show that the Hybrid Workplace Model has its own pros and cons from the employees’ viewpoint. Many respondents were pessimistic about this new model, while the majority felt that the Hybrid Workplace model should be adopted by their companies.

One of the highly beneficial reasons for employees to work in a Hybrid work environment is that this model would ensure a balance between creativity and collaboration. However, following a daily work routine would pose a problem for the majority of the respondents if their companies adopted the new model. Through this study, not only employees but also employers will gain an understanding of the Hybrid Workplace and how to see the future of their organisation through the eyes of this blended model of working.

**Keywords:** COVID-19, Hybrid Workplace, Blended Working Model, Work From Home (WFH), Virtual Working

### **Introduction:**

Since last year, the world has been observing swift changes than ever before due to the pandemic. Everyone had to be accustomed to the new normal. We all know that not even a single economic sector was unaffected by the pandemic. Now, the question arises: what next? How should it be done? After the pandemic ends, many companies plan to consider a new work setup. Giant corporations are also considering working from home as an option. There is also talk doing rounds regarding blended workplace/ Hybrid workplace. The pandemic has changed the talent base. Companies like WIPRO, Infosys, TCS, and Microsoft, to mention a few, are adopting this new model where some aspects of work could be performed from home, and some parts could be performed in the office.

All these depend not only on the size of the companies and the nature of the business but also on the employees' preferences. It is crucial at this stage to understand how the employees feel about working in a blended mode and how the company needs to tailor the specific needs of employees, keeping in mind the goals and culture of the company. This is vital because the attrition rate in MNCs has rapidly increased since last year, and employees have been facing difficulty working from home. Apart from adopting this new technique, companies must also work on acquiring new employees and retaining talented ones.

This research attempts to understand employees' perceptions of working in a Hybrid environment, which has its own merits and demerits.

### **REVIEW OF LITERATURE:**

(Pavithra et al., 2021) conducted an exploratory study on employees' perceptions of and satisfaction with traditional office and WFH culture. The research revealed some significant results, with only 31% of the respondents preferring to work from home. It was found that the

majority of the respondents had never worked from home before the pandemic. Only 27.9% of the respondents felt that their work-life balance was well managed during work from home, which indicates that most of the respondents managed their professional and personal lives better while working from the office. The study also depicted that the respondents' age and satisfaction level are positively correlated.

(Deloitte, 2021) conducted a survey on employers' adoption of the hybrid model. The survey found that 43% of the companies never or rarely allowed work from home. At the same time, most respondents felt that it was difficult to perform work at home at the same level as they did at the office. Few companies observed an increase in the productivity of their employees during work from home during the pandemic. The research found that nearly 74% of the companies did not address the employees' contracts to be amended during the pandemic. Only 21% of the companies provided all the necessary equipment for employees to work from home.

## RESEARCH OBJECTIVES

1. To identify the respondents' perception towards Work from Home.
2. To understand the pros and cons of working in a Hybrid Workplace from employees' viewpoint.
3. To scrutinise the relationship between the demographic profile of the respondents and their perception towards working in Hybrid mode.

**RESEARCH GAP:** There is a lack of literature available on analysing how the Hybrid Model would work in India and how the employees would perceive it emotionally and professionally. Hence, this study can bridge the research gap in this area.

## RESEARCH METHODOLOGY:

**Research Type & Design:** This exploratory and descriptive research study collected data through an online structured questionnaire circulated among working people in Chennai.

**Source of Data:** The primary data used in this research is primary data.

**Sampling Technique:** Using a random sampling method, the study received responses from 100 employees working in different sectors, such as IT, the Financial Sector, Retail services, Education, and Consulting Firms.

Out of the 100 responses received, it was found that only 64 preferred the hybrid working model to be adopted in their organisation; hence, to achieve the research objectives, the responses received from 64 respondents were taken for further statistical analysis. The Google form automatically stopped collecting responses from those respondents who have opted that

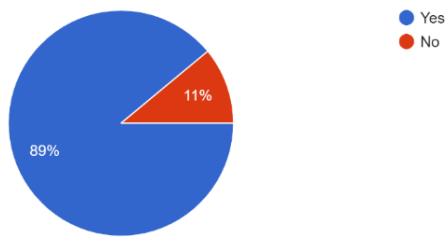


they would never suggest their companies should adopt a Hybrid work model or their jobs cannot be performed online. Hence, the last chart shows responses only from 64 respondents who suggested the Hybrid Work model will better suit their organisation.

**DATA ANALYSIS & INTERPRETATION:**

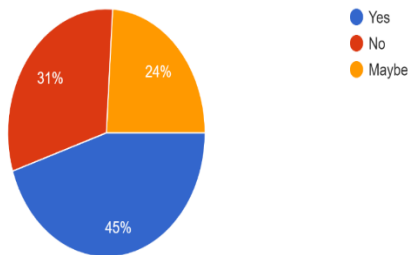
**ADOPTION OF WFH BY THE RESPONDENTS' COMPANIES**

6. Had your company adopted Work From Home (WFH) during pandemic last year?  
100 responses



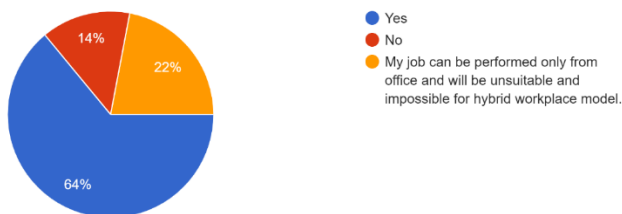
**PREFERENCE TOWARDS WFH IN FUTURE**

8. Would you prefer working from home even in future.  
100 responses



**SUGGESTION TO ADOPT HYBRID WORK MODEL**

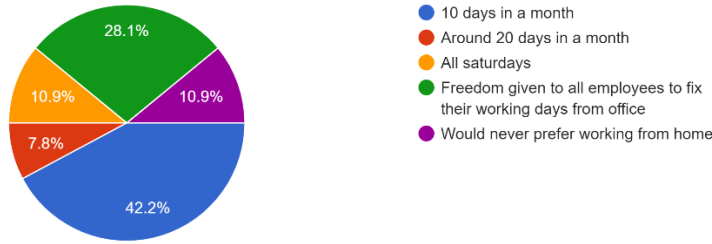
9. Do you suggest your company should adopt Hybrid Work model?  
100 responses



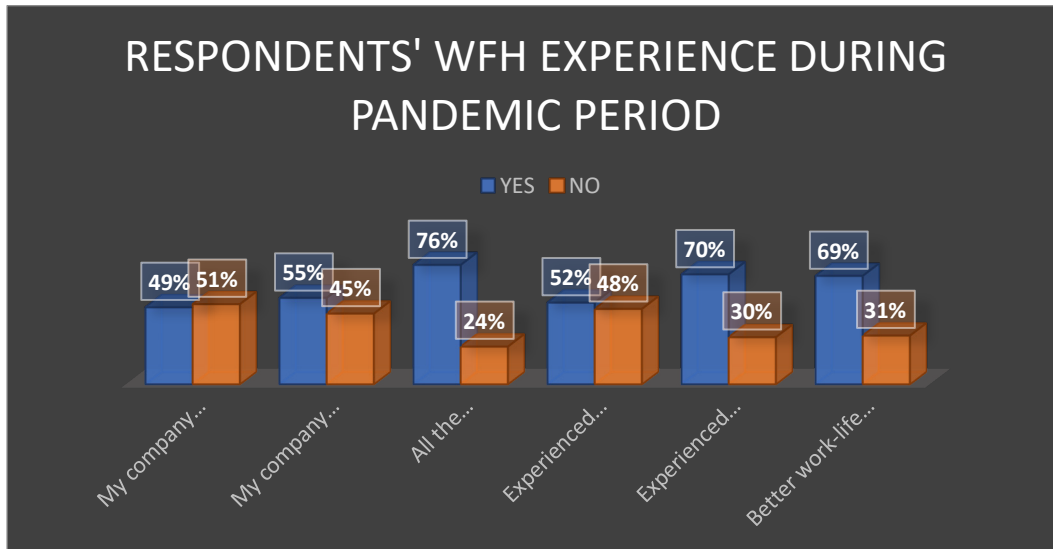
**FREQUENCY OF WFH IN A HYBRID WORK MODEL**

12. Under hybrid workplace model how many times would you prefer working from home.

64 responses



**RESPONDENTS' EXPERIENCE WITH WFH DURING THE PANDEMIC**



- The study found that most respondents worked online during the pandemic. Only 49% of the respondents received technical equipment, such as computers, internet services, etc., from their companies while working from home. Most respondents (55%) had the flexibility to choose their working hours. It was found that 76% of respondents agreed that while working online, their tasks and projects would be completed even before the deadline, and 69% felt that they spent adequate time with their friends and family, which helped them manage their work-life balance better.
- It was also found that 52% of respondents experienced stress and burnout due to working online, and 70% experienced a lack of interaction with their colleagues.

**TABLE 1: RESPONDENTS' VIEW ON THE BENEFITS OF THE HYBRID WORKPLACE MODEL IN THEIR ORGANIZATION**

BENEFITS OF HYBRID WORK MODEL IN YOUR ORGANIZATION	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N	Mean
It will ensure better space management in the company	30	28	5	1	0	64	1.6406
Increase the productivity of employees due to proper work-life balance	26	30	7	1	0	64	1.7344

Improve mental and physical health	26	29	6	3	0	64	1.7813
It will ensure a balance of creativity and collaboration	13	35	14	2	0	64	2.0781
Saving extra travel costs and time	39	22	2	1	0	64	1.4531
Ensuring adequate time is spent with family and friends	34	22	8	0	0	64	1.5938
<b>More autonomy and flexibility to prioritise task</b>	<b>17</b>	<b>29</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>2.0156</b>

**TABLE 2: RESPONDENTS' VIEW ON HURDLES FACED WHILE WORKING ON HYBRID MODE**

HURDLES FACED IN HYBRID WORK MODEL	Strongly Agree	Agree	Neutra l	Disagree	Strongly Disagree	N	Mean
The workplace may feel dull when many employees are working from home	17	30	14	3	0	64	2.0469
I struggle to know who is on-site and when	13	38	8	5	0	64	2.0781
Problems in interacting with colleagues and teammates	12	30	13	7	2	64	2.3281
A lot of distractions when working from home	8	23	22	6	5	64	2.6406
Poor broadband connectivity and technical equipment at home	9	28	14	9	4	64	2.5469
High cybersecurity risk	5	23	21	13	2	64	2.7500
Increased employee isolation and social disconnectivity	12	30	16	5	1	64	2.2656
Over-politicized workplace as more power will come to those employees who more often visit the workplace	11	14	30	7	2	64	2.6094
<b>Difficulty in following work routine</b>	<b>6</b>	<b>19</b>	<b>25</b>	<b>10</b>	<b>4</b>	<b>64</b>	<b>2.7969</b>

### INDEPENDENT SAMPLE T-TEST

The Independent sample T-test compares the mean of two independent groups to determine whether there is statistical evidence associated between the two mean groups is statistical.

#### Hypothesis:

**H0:** There is no significant association between the sample means of Gender of the respondents and better work-life balance experienced while working from home during the Pandemic.

**H1:** There is a significant association between the sample means of the respondents' gender and better work-life balance experienced while working from home during the Pandemic.

Crosstab

			Better Work-life balance		Total
			Yes	No	
<b>Gender</b>	<b>Female</b>	Count	42	12	54
		Expected Count	37.3	16.7	54.0
		% Within Gender	77.8%	22.2%	100.0%
	<b>Male</b>	Count	27	19	46
		Expected Count	31.7	14.3	46.0
		% Within Gender	58.7%	41.3%	100.0%
<b>Total</b>	Count	69	31	100	
	Expected Count	69.0	31.0	100.0	
	% Within Gender	69.0%	31.0%	100.0%	

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.229	1	.040
N of Valid Cases	100		

Cross-tabulation data shows that most respondents experienced better balance in their professional and personal lives while working online during the pandemic. The Pearson Chi-square value is also statistically evident, as the p-value (0.04) is less than 0.05.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
<b>Better Work-Life Balance</b>	Equal variances assumed	14.658	.000	-2.080	98	.040	-.19082	.09173	-.37287	-.00878
	Equal variances are not assumed.			-2.052	88.450	.043	-.19082	.09300	-.37562	-.00602

Independent sample t-test results also accept the alternative hypothesis as the p-value (0.000) is less than 0.05. Both these tests were performed on all the 100 respondents. Hence, there is a significant difference between the sample means of both variables.

**INDEPENDENT SAMPLE T-TEST: ANALYSIS**

**Group Statistics**

Gender		N	Mean	Std. Deviation	Std. Error Mean
<b>Preference towards WFH if a Hybrid Mode of working is adopted</b>	Male	42	2.7381	1.41524	.21838
	Female	22	2.5455	1.40500	.29955

**Independent Samples Test**

	Levene's Test for Equality of Variances	t-test for Equality of Means								
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
<b>Preference towards WFH if a Hybrid Mode of working is adopted</b> Equal variances assumed	.008	.930	.518	62	.606	.19264	.37155	-.55008	.93536	
Equal variances are not assumed.			.520	43.028	.606	.19264	.37070	-.55493	.94021	

Since the p-value (0.930) is higher than the significant value of 0.05, the null hypothesis is accepted that there is no difference between the respondents' genders and their desired frequency of working from home if their organisation adopts the Hybrid Work Mode.

**FINDINGS:**

- The demographic profile of the respondents shows that 54% were female and 45% were male. Twenty-three per cent of the respondents had an Undergraduate degree, 38% had a Postgraduate degree, 20% had a Professional degree, and 19% had a Doctorate Degree. Thirty-six per cent of the respondents were in the age group of 20-29, 26% were in the age group of 30-39, 22% were in the age group of 40-49, and 16% were above 50.

- Fifteen percent of the respondents had work experience ranging from 1-3 years, 16% had 3-5 years of work experience, 19% had 5-10 years of experience, and 50% had more than ten years of experience. It was found that 29% of respondents worked in financial service companies, 23% worked in the IT sector, 32% worked in educational institutions, 9% in the retail sector, 3% worked in the Consulting Service sector, and the remaining respondents were self-employed. (The demographic profile includes all the 100 respondents).
- When the pandemic started, 89% (**Chart 1**) of the respondents had worked online from home. But when asked if they would prefer continuing WFH under the Hybrid Work Model, 64% (**Chart 3**) favoured this new model, where they could work virtually and physically as well. It was also found that 42% (**Chart 4**) of the respondents preferred working from home ten days a month.
- Table 1 shows the respondents' positive view of the Hybrid Workplace model, and Table 2 shows their opposing views. The mean value of 2.0781 in Table 1 shows that one of the highly preferred reasons for working under Hybrid Mode is that this model would ensure a balance between creativity and collaboration. The mean value of 2.7969 in Table 2 shows that under Hybrid Mode, respondents felt that following a routine schedule would be difficult.

## CONCLUSION:

With the growing digitisation, reliance on technology has increased in almost all our lives, especially during the pandemic. Although some people couldn't successfully use technology for their benefit, leading to loss of business and jobs, some companies, both large and small, have considered the pandemic an advantage. These companies adopted digital solutions for all their activities, which proved to be a double-edged sword for employers and employees.

This study shows how adopting Work from Home during the pandemic has been beneficial and stressful for the employees. In predicting the destructive impact of COVID, many companies are moving towards a hybrid work model, where companies can work physically and virtually at times.

## IMPLICATIONS OF THE STUDY:

- This research paper discusses how the respondents perceived Work from Home. It also surveyed whether the respondents prefer the new concept of a Hybrid

Workplace, its pros and cons, and whether they would prefer if their organisations adopted a Hybrid work mode in the future.

- This study would help many organisations understand how employees perceive Hybrid Mode before they adopt this new concept. Companies may understand the comfort and difficulties the employees may face in the future. This study is also an effort to help the employees adjust to the new normal working mode.
- The study may provide an opportunity for other researchers to conduct extensive research in this field. Researchers may also survey particular companies that have adopted the Hybrid Workplace model.

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## Impact of Covid-19 Pandemic on Teaching and Learning Process in Education System Through ICT

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### Abstract

Due to the COVID-19 pandemic, state governments temporarily shut down all schools and colleges. As per that disrupted situation, opening the schools and colleges was impossible. So, there is no doubt about it: the educational sector is going through a crucial time because all the competitive exams, college exams, and board exams have been cancelled and delayed due to COVID-19. Finding a solution for COVID-19, which affected around 600 million learners or students worldwide, was necessary. The educational system collapsed during the lockdown period of the novel coronavirus disease 2019 (COVID-19) in India and globally. This research aims to understand how the pandemic has disrupted the higher education sector and how the strategies can be implemented through digital learning tools and technology to transform the education system. It also aims to study the constraints of adapting to this current situation.

This paper will focus on an intellectually enriched opportunity for future academic decision-making. The intense purpose of this project addresses the required essential situations of online teaching-learning in education amid the COVID-19 pandemic and how we can use the existing resources of educational institutions so that effectively we can transform the formal education system into online education with the help of virtual classes and other e-learning tools like Moodle etc.

The impact of ICT in the era of digitalisation, globalisation and the information age is evident in higher education. ICT has revolutionised and transfigured classroom learning and teaching methods and altered distance learning programs, leading to reorganised libraries and attainable learning materials. Of course, we cannot say that the current educational information



technologies are exceptional for use, especially in the modern context of the coronavirus pandemic.

**Keywords:** COVID-19 pandemic, educational system, ICT

### **Introduction**

The COVID-19 pandemic has significantly impacted various aspects of life worldwide. Education is one of the sectors that were hit hard by this pandemic. With the closure of schools and universities, the education system was forced to adapt to remote learning and teaching through Information and Communication Technology (ICT). The shift towards ICT has significantly impacted education systems' teaching and learning processes worldwide. This article will explore the impact of the COVID-19 pandemic on the teaching and learning process in the education system through ICT.

### **Background**

The COVID-19 pandemic caused an unprecedented disruption in the education system worldwide. In response, many countries decided to close schools, colleges, and universities to prevent the spread of the virus. According to UNESCO, more than 1.5 billion students were affected by school closures, which accounted for 90% of the world's student population. This situation led to a significant shift in the education system, forcing it to adopt alternative teaching and learning methods through ICT.

### **Impact of the COVID-19 Pandemic on Teaching and Learning**

The COVID-19 pandemic significantly impacted the teaching and learning process in the education system. Here are some of the effects of the pandemic on teaching and learning:

**Challenges in accessing technology and internet connectivity:** One of the significant challenges faced by the education system during the pandemic was the lack of access to technology and internet connectivity. This challenge was particularly severe in developing countries, where many students could not access computers, smartphones, or the internet. As a result, many students were left behind and unable to participate in remote learning. In many countries, students from low-income households or rural areas could not access computers, internet, or digital devices, making remote learning difficult or impossible. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), 43% of households worldwide lack access to the Internet, making it difficult for students to access online learning resources (UNESCO, 2020). The COVID-19 pandemic has highlighted the

need for governments to invest in technology infrastructure to ensure all students have access to technology and digital devices to participate in remote learning.

**Increased dependence on ICT:** With the closure of schools and universities, the education system had to rely heavily on ICT for teaching and learning. Teachers had to learn new skills to use online platforms like Zoom, Google Classroom, and Microsoft Teams to deliver their lessons. Students also had to adapt to these new modes of learning, which required a lot of self-discipline and motivation.

**Reduced quality of education:** The sudden shift to remote learning harmed the quality of education. Many teachers were not adequately trained in delivering online lessons, which led to a decline in the quality of education. Moreover, the lack of interaction between students and teachers resulted in a reduced quality of learning.

**Increased workload for teachers:** The shift to remote learning required teachers to spend more time creating lesson plans, grading assignments, and communicating with students. This increased workload led to burnout among some teachers, who struggled to balance their work and personal lives.

**Increased focus on digital skills:** The pandemic has highlighted the importance of digital skills in the education system. Teachers and students had to learn digital skills to adapt to the new learning mode. This shift has opened up new opportunities for students to develop digital skills, which are increasingly important today.

**Loss of Social Interaction:** However, the shift towards online learning has also resulted in the loss of vital social interaction in the traditional education system. The conventional education system promotes social interaction between students, teachers, and peers. Social interaction is crucial in developing social skills and emotional intelligence, which are critical in personal and professional development. The loss of social interaction has also resulted in a lack of motivation among students. Online learning can be isolating, making students feel disconnected from the learning process. The lack of social interaction has also resulted in limited opportunities for collaboration and teamwork, which are critical in developing interpersonal skills. The lack of social interaction has also resulted in limited opportunities for students to build networks and relationships, essential in personal and professional development.

**Loss of Practical Learning:** The shift towards online learning has also resulted in a loss of practical learning opportunities. Many courses require practical or hands-on learning, such as

laboratory experiments, fieldwork, and internships. These practical learning opportunities are difficult to replicate online, limiting students' learning experiences.

**Teacher Preparedness:** Furthermore, the impact of COVID-19 on the teaching and learning process through ICT has highlighted the need for teacher preparedness. Adopting online learning has required teachers to adopt new approaches to teaching and learning, which requires new skills and knowledge. The pandemic has highlighted the need for teacher training and professional development to ensure teachers are prepared to deliver education in the digital age. The lack of teacher preparedness has resulted in limited access to education for many students. The inability of teachers to deliver effective online instruction has resulted in restricted access to education for students. The pandemic has highlighted the need for teacher training and professional development to ensure teachers are prepared to deliver effective online instruction.

**Digital Divide:** Another significant adverse impact is the digital divide in many countries. The pandemic has highlighted the inequities in access to technology and the internet, with many students in developing countries unable to access online learning due to the lack of internet connectivity or devices. This has resulted in many students being left behind, widening the education gap between students in developed and developing countries. The digital divide has resulted in the exclusion of many students from education. The lack of access to technology and the internet has limited the ability of students to access educational resources, resulting in limited access to education. The digital divide has also resulted in a widening of the education gap between students in developed and developing countries, resulting in restricted access to education for students in developing countries.

### **Benefits of ICT in Teaching and Learning**

Despite the challenges posed by the COVID-19 pandemic, adopting ICT in the education system has brought many benefits. Here are some of the advantages of ICT in teaching and learning:

**Increased access to education:** ICT has enabled students to access education from anywhere, at any time. This has opened up opportunities for students who were previously unable to attend school due to geographical or financial constraints.

**Improved flexibility and convenience:** The COVID-19 pandemic has accelerated the adoption of online learning worldwide, leading to increased flexibility in the learning process. Online learning allows students to access educational resources at any time and from any

location, provided they can access the Internet. This flexibility has allowed students to take charge of their learning process and work independently. Online learning has also allowed students to balance their academic commitments with other responsibilities, such as work or family obligations. In addition, online learning has allowed students to learn new skills they would not have otherwise learned in traditional classrooms. Online learning has facilitated interactive learning materials, such as simulations, animations, and virtual reality, which provide a more engaging and interactive learning experience. Furthermore, online learning has facilitated collaboration and communication among students from different geographical locations and cultures, which has helped to develop global competencies.

**Improved engagement:** ICT tools such as videos, interactive quizzes, and online forums have made learning more engaging and interactive. This has resulted in improved student participation and better learning outcomes.

**New Teaching Methods and Strategies:** The shift towards online learning has also resulted in the development of new teaching methods and strategies that have the potential to transform the traditional education system. Conventional teaching methods have been criticised for being teacher-centred, where the teacher delivers content to students, who are passive recipients of knowledge. Online learning has facilitated student-centred approaches to teaching, where the students actively participate in the learning process. Online learning has facilitated personalised learning, where students can work independently and focus on their learning needs. Online learning has also facilitated adaptive learning, where students receive personalised feedback based on their performance, allowing them to improve their learning outcomes. Additionally, online learning has facilitated the use of flipped classrooms, where students access learning materials before the class, and the class time is used for interactive discussions and collaborative activities.

**Digital Literacy:** The shift towards online learning has also highlighted the importance of digital literacy among students and teachers. Digital literacy uses technology to access, evaluate, and communicate information effectively. The COVID-19 pandemic has shown that digital literacy is essential for students to participate in online learning effectively. Teachers also need digital literacy skills to deliver online learning effectively.

**Improved collaboration:** ICT has significantly improved collaboration by providing real-time communication tools, collaboration platforms, and cloud computing, enabling remote working and enhancing data sharing. Collaboration through ICT has increased productivity, improved

decision-making, and allowed for effective teamwork among geographically dispersed student communities:

- **Real-time communication:** ICT provides real-time communication tools such as instant messaging, video conferencing, and webinars, allowing students and teachers to communicate and share information instantly from anywhere.
- **Collaboration tools:** Many tools enable students to collaborate, share documents and files, and track progress. Such tools include Microsoft Teams, Google Workspace, Trello, and Asana.
- **Cloud computing:** Cloud computing has enabled students to collaborate on projects in real-time from different locations. Cloud-based platforms such as Google Drive and Dropbox allow them to share documents, edit them simultaneously, and track changes.
- **Enhanced data sharing:** ICT has made sharing data and information among students easier. Data can be accessed and shared in real time, and revisions can be tracked to ensure everyone is working on the latest version.
- **Increased productivity:** ICT has increased productivity by enabling students to work more efficiently and effectively. They can work on the same document simultaneously, communicate instantly, and track progress, leading to faster completion of projects.
- **Improved decision-making:** Collaboration through ICT has improved decision-making by enabling teams to share ideas and opinions more easily. Students can contribute their thoughts and ideas to the project, leading to better-informed decisions.

## Conclusion

In conclusion, the COVID-19 pandemic has significantly impacted the teaching and learning process in education systems worldwide through ICT. The pandemic has highlighted the digital divide in many countries, resulting in unequal access to education. However, the shift towards online learning has also provided increased flexibility in the learning process, allowed for the development of new teaching methods and strategies, and emphasized the importance of digital literacy. Nonetheless, the loss of social interaction and practical learning opportunities is a significant challenge in the shift towards online learning.

To mitigate the impact of the COVID-19 pandemic on the teaching and learning process in education systems through ICT, governments must invest in technology infrastructure to ensure that all students have access to technology and digital devices. Governments must also provide digital literacy training for students and teachers to participate in online learning effectively.

Additionally, the traditional education system must adapt to incorporate the benefits of online learning while still promoting social interaction and practical learning opportunities.

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## Exploratory Factor Analysis of Factors Influencing Employers in Choosing an Institute for Campus Selections

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### Abstract

**Problem** – Not all employers choose all institutes for campus selections and not all conduct centralised recruitments. Hence, it is essential to find what brings employers to an institute for selecting students irrespective of their sector. The study highlights the most critical variables of the 12 MBA students employers consider when choosing an institute for campus placements. It presents the reduction of 12 into three factors using Exploratory Factor Analysis (EFA).

**Objectives** – To identify and explore factors influencing employers in choosing an institute for selecting students.

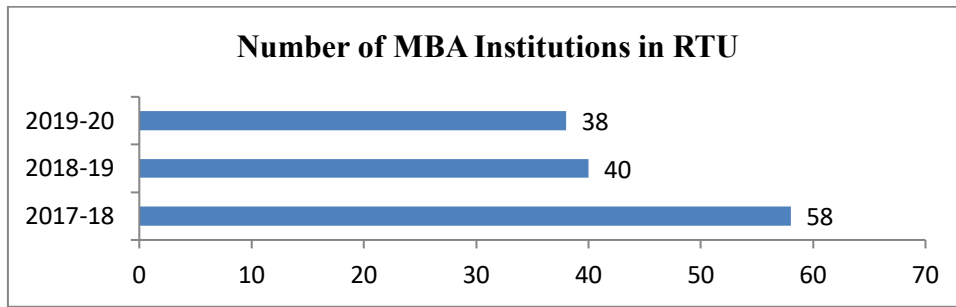
**Findings** – This research reveals that ‘Performance and Image of Previous Employees, Previous Year student results and NAAC Grades and NBA Ratings’ are the most critical variables in the eyes of employers. At the same time, they select an institute for campus selection. EFA resulted in the formulation of 3 factors, named ‘Accreditation and Rankings, Past Results – Academic and Extra Curricular, Student Fitness, Environment Friendliness of Institute and Its location.’

**Originality** – Employers are secondary customers, and it is essential to find out what they consider necessary in an institute while choosing an institute for campus selection. This study is the first of its kind to study the preferences of employers of MBA students in Rajasthan. The results of EFA can help the MBA institutes of Rajasthan to formulate a strategy to attract employers to campus.

**Keywords:** Campus Selections, Sustainability, Quality Management, Corona Positive Record, Performance and image of previous employees

**Introduction**

A product or service's success depends on whether its customers like it. An educational institute which renders educational services has two types of customers: students as primary customers and employers as secondary customers as written in (Chaturvedi Joohi, 2015). Students and their parents are customers at the entry stage of an institute, and employers are customers at the exit stage. If an institute can attract students to procure its educational services, then only the question of attracting Employers emerges. Else. The institute's existence and journey to develop budding students might not last long, as evident in Figure 1. There may be a strong correlation between the number of Employers visiting an institute for campus selections and the number of students enrolled.



**Figure 1 Declining Number of MBA Institutions in RTU(Source: (2020, 2020) (2019, 2019) (2018, 2018))**

Figure 1 exemplifies Charles Darwin's theory of Survival of the fittest, which means that the institutes that cannot attract students are not fit enough to survive in this competitive world. Employers have two selection criteria: the first is for selecting the institute for conducting campus selections, and the other is to select students. It is believed that the institutions that deliver high-quality education will be able to survive. Quality, as defined by Mr Joseph Juran, is fitness for purpose (Thakkar, 2022), and most students enrol in Higher Educational Courses like an MBA to get a good job offering a decent salary. Employers are looking for a lucrative combination of knowledge, skills, abilities and attitudes in students, which is required for suitable job profiles in their organisation.

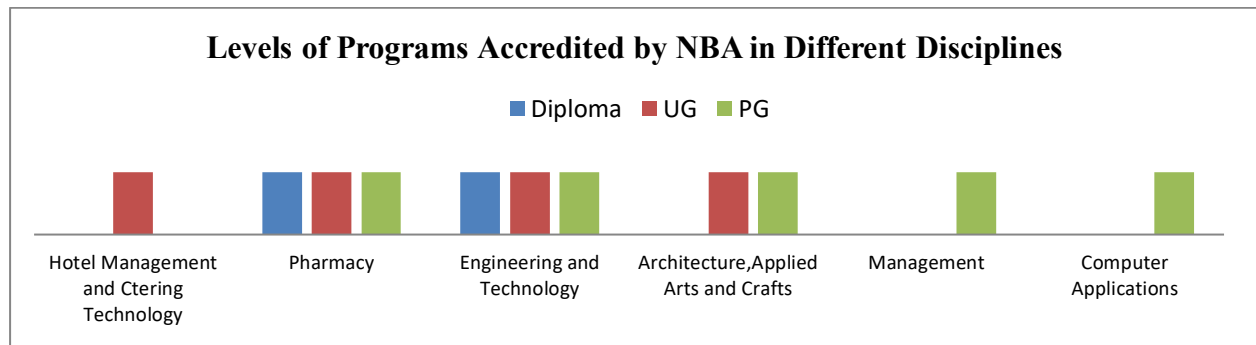
**Literature Review**



The variables considered for factor analysis were the dominant factors concerning the Quality of the institute, Sustainable practices used by the institute, Access of industry to the talent available in the institute and health of the students from the pandemic perspective, and these were picked from guidelines of assessment standards and approved after content validation by experts. No research papers were found about an employer's criteria for choosing a campus for selecting students. The variables used in the questionnaire are described below.

**1. NAAC Grades"** – According to (Team N. , NAAC/Home/Info for Institutions/AQAR) National Accreditation and Assessment Council grades the institute based on seven parameters, which include parameters related to Governance, Teaching Learning and Evaluation, Research, Infrastructure, Governance and Curricular aspects and Student Support and Progression.

**2. NBA Rating** stands for National Board of Accreditation grades and, according to (Team N., 2019), rates the institutes which run courses related to 6 disciplines, including Engineering, Management, Architecture, Pharmacy, Computer Applications and Hospital and Tourism Management, as shown in Figure 2.



**Figure 2 Levels of Programs Accredited by NBA in Different Disciplines (Source: (Team N. , 2019))**

**3. World Rankings** –Different World Rankings include (team, 2021) , (Unit) and (Russian Federation), ((CWUR)) etc. Scoring a good rank in the world rankings indicates that the institution's systems are working well.

**4. National Institutional Ranking Framework** - (National Institutional Ranking Framework (NIRF), 2017) is released by the “Ministry of Human Resource Development”, and every year, the rankings are released for the institutes who apply for same.NIRF has

criteria on which institutes are judged based on the teaching-learning processes, placements and higher educational admissions, measures related to promoting women's diversity, etc.

**5. Previous Year Student Results**, as mentioned in (Team N., [naac.gov.in/resources/publications/manuals/revised manual for universities/5.2.3, 2019](http://naac.gov.in/resources/publications/manuals/revised_manual_for_universities/5.2.3,2019)), include the academic performances of the students when they take exams on the tests designed based on the syllabus designed by their institute or university.

**6.** (R.Covey, 2012) disclosed “Sharpening the Saw “ as one of the seven habits of highly effective people, which means investing in the most significant asset that you own, and that is yourself, and that is through the all-round development of intellectual or mental social/emotional, physical, spiritual and **Previous year achievements in extracurricular activities** contribute in all of the above.

**7. Previous year Sports Achievements**, which is a point in (Team N. , [naac.gov.in>Resources>Publications>Manuals>revised manual for universities>5.3.1, 2019](http://naac.gov.in/Resourcess/Publications/Manuals/revised_manual_for_universities/5.3.1,2019)) contribute to the physical development of students. These also contribute to developing skills like team building, strategy development, stress management, etc.

**8. The distance of the institute from the industry location indicates the ease of access to the talent of students studying there. It is a point which emerged during brainstorming: if an institute is close to the industry, the ease of access is greater, and if it is far away, it is vice versa.**

**9. Green campuses**, which are also rewarded under (Team A. , 2020) are generally symbolic of the Environment-Friendly Practices that institutes exhibit where they focus on utilising renewable sources of energy, using biodegradable products and focusing on initiatives like reducing, reusing and recycling as waste management in itself results in efficient utilisation of energy. According to (Team W. G., 2022) green campuses preserve natural resources and positively impact the natural environment, hence focusing on sustainability.

**10.** With the emergence of pandemic across the globe **Corona positive record** indicates adherence to the covid appropriate behaviour as shown in (Ministry of Health and Family Welfare). Better adherence to COVID-19 Appropriate Behaviour will result in the selection

of candidates likely to be free from COVID-19, and there will be a lesser risk of the industry shutting down due to the spread of COVID-19 from selected students.

**11. Performance and image of previous employees selected from the same institute** is a variable which indicates the number of students selected from an institute over the years, and the success and work ethics practised by these selected students is a measure of their performance and image.

**12. Previous year placement percentage** indicates the percentage of students out of the total intake by an institute in a program who got jobs or placements, which is also an indicator (Development, 2021).

### **Research Gap**

None of the studies that emphasised variables considered and factors influencing employers' selection of an institute for selecting MBA students studying in Rajasthan from campus were found.

### **Objectives of Research**

1. To identify and explore factors influencing employers in choosing an institute to select students from campus.

### **Research Methodology**

The sampling frame was “Employers of MBA students studying in various MBA institutes of Rajasthan “.

Forty-eight employers based on the above-predefined criteria participated in the study, and a non-random sampling technique of quota type was used; the survey questionnaire was sent using LinkedIn, and the contact details are given in the Self Study Reports of recently NAAC accredited MBA institutions.

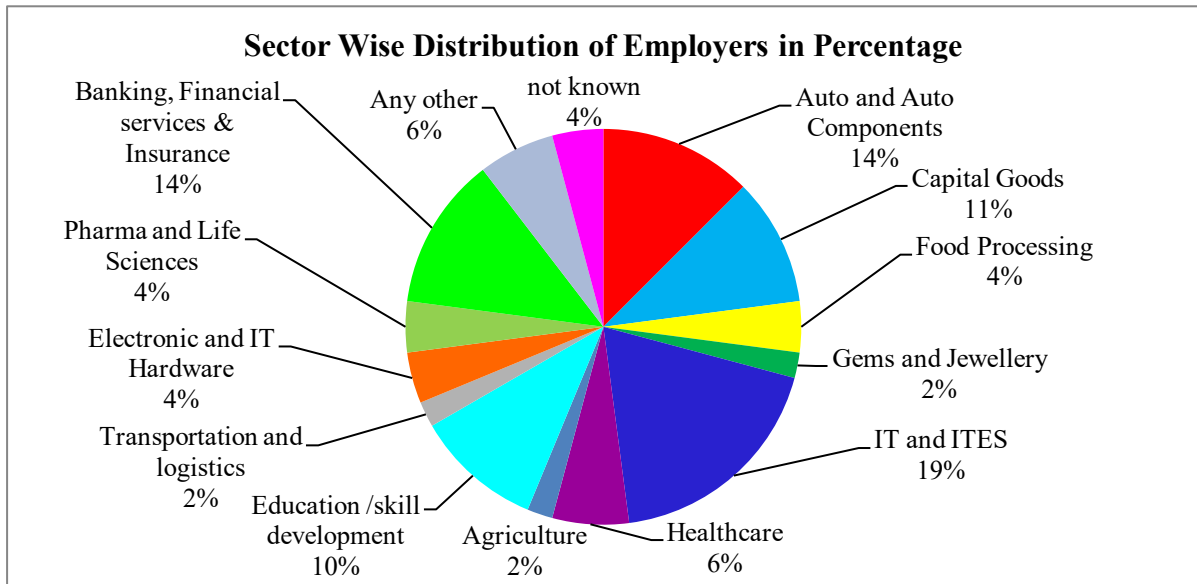
The primary data was collected, and it is a descriptive kind of research design and type. The **inductive approach** was used for data collection and analysis, formulating some theory or conclusions.

**Exploratory factor analysis** was used to reduce the variables into factor groups .5. A 5-point Likert Scale was used to understand employer opinion. The first step in Exploratory Factor Analysis is called **Data Purification and Cleaning, according to** (Kastia, 2020) . The 48 responses to the question “Which variables do employers consider as crucial while choosing an institute for selecting students?” are summarised in Figure 3.1. The response was empty and hence was not considered in further analysis. Out of the 564(47 employers\*12 variables) cells containing Employer Responses, nine cells were empty, which were filled during **data purification (editing and coding)** and cleaning by filling the mean value of each column based on (Nayak J. K., Courses>Management>NOC:Marketing Research and Analysis-II (Video) >Lec :17-20, 2018) . The scope of the study is defined as Employers of MBA students studying in various institutes in Rajasthan.

**The reliability of the questionnaire was 0.770 and was checked using the Chronbach alpha test.**

**Content validity was checked by experts with vast experience from different domains, and their contribution is acknowledged in the acknowledgements section.**

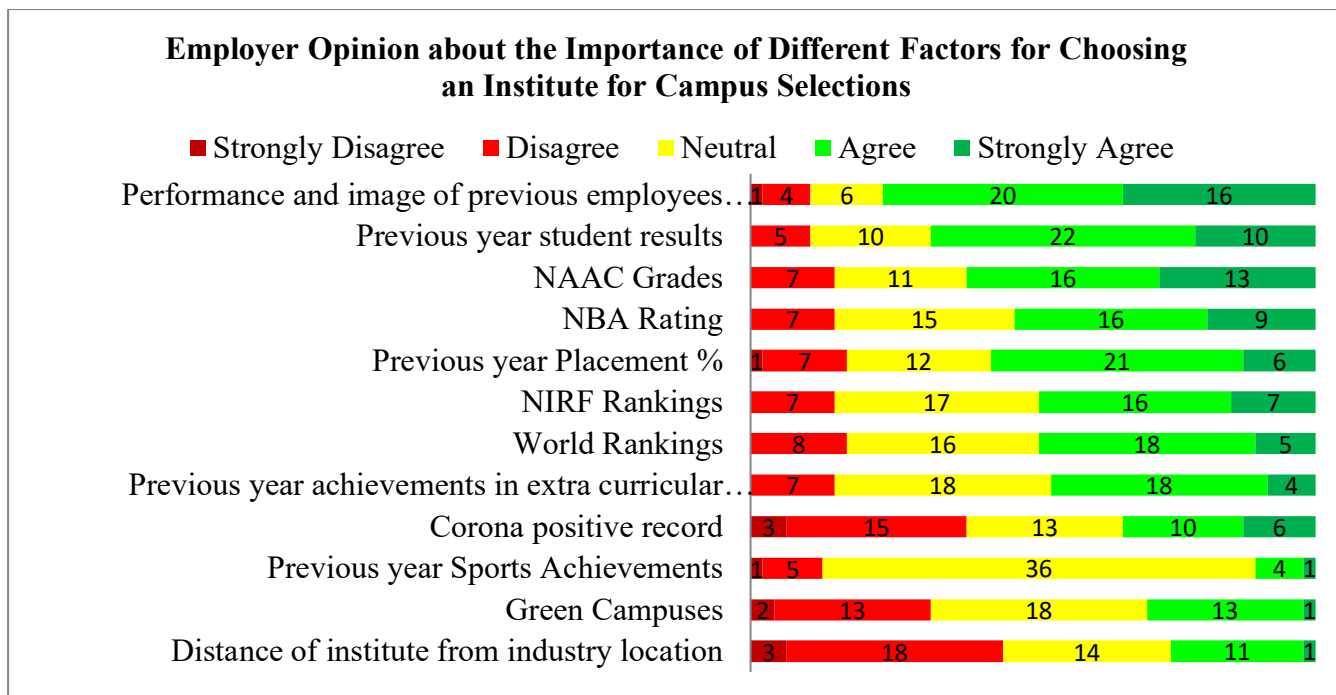
The participating employers belonged to different sectors, as evidenced by Figure 3.



**Figure 3 Sector-wise distribution of participating Employers in percentage (Source: (Chaturvedi & Rai, 2020))**

## 6. Findings and Data Analysis

1. The Employers expressed their opinions about different factors and their importance while choosing an institute for campus selections using a 5-point Likert Scale, as evident in (Chaturvedi RaiFigure 4).



**Figure 4 Importance Given by Employers to Factors for Choosing an Institute for Campus Selections (Chaturvedi & Rai, 2020)**

2. Exploratory Factor Analysis was applied to reduce the 12 factors into 3 or 4 factor groups with included variables having high correlation.

2.1 Step 1 of EFA, according to (Kastia, 2020), is finding the missing data, and the results showed that there were no observations with missing data in step 2; it was found that all standard deviations were more significant than zero. The standard deviation of 47 individual employer responses was checked, and it was observed that for two employers, the standard deviation was zero, so it was a possibility that these employer's responses were part of a non-sampling error as employers might have filled the questionnaire without interest, and their responses were not actual responses. So, the two responses with zero standard deviation were deleted, and the remaining data consisted of data from 45 employers. The mean of the 12 variables showed that 9 out of 12 variables had a mean greater than 3, meaning that the employers were considered essential, and three variables were unimportant as having a mean less than 3.

2.2 Formulating Correlation Matrix and Testing for Appropriateness of Factor Analysis

A correlation matrix was plotted between all variables, and “Bartlett’s Test of Sphericity” was applied as shown in (K.Malhotra & Das, Factor Analysis, January 2015). It was evident in Table I below that the diagonal elements have the value 1, and the other elements have

values ranging between -1 and 1 and are not 0. Table II shows the results of Bartlett's Sphericity Test, where the observed Chi-Square is greater than the critical Chi-Square; hence, the null hypothesis was rejected, and an alternate was accepted. The null hypothesis states that no correlations between variables differ significantly from 0, and the alternate states that at least one of the correlations linking variables differs significantly from zero. Table III shows "Kaiser-Meyer-Olkin(KMO)", which measures sampling adequacy. It compares the observed correlation coefficients to the magnitudes of partial correlation coefficients. The Overall KMO value was more significant than 0.5, so the factor analysis is an appropriate technique (K.Malhotra & Das, Factor Analysis, January 2015). Small values of KMO indicate that other variables and factor analysis cannot explain the correlations linking pairs of variables, which may not be appropriate.

**Table I Correlation Matrix (Source: EFA)**

Variables	NAAC Grades	NBA Rating	World Rankings	NIRF Rankings	Previous year Placement %	Previous year student results	Previous year achievements in extra curricular activities	Previous year Sports Achievements	Distance of institute from industry location	Green Campuses	Performance and image of previous employees selected from same institute	Corona positive record
NAAC Grades	1	0.818	0.581	0.580	0.338	0.173	0.081	0.098	-0.121	0.154	0.242	0.171
NBA Rating	0.818	1	0.703	0.761	0.340	0.045	-0.011	0.022	-0.127	0.228	0.260	0.243
World Rankings	0.581	0.703	1	0.833	0.408	0.259	0.016	-0.102	0.022	0.370	0.283	0.264
NIRF Rankings	0.580	0.761	0.833	1	0.382	0.161	0.064	0.059	0.089	0.415	0.202	0.317
Previous year Placement %	0.338	0.340	0.408	0.382	1	0.359	0.129	-0.091	-0.027	0.100	0.124	-0.010
Previous year student results	0.173	0.045	0.259	0.161	0.359	1	0.385	-0.047	0.128	0.017	0.276	0.067
Previous year achievements in extra curricular activities	0.081	-0.011	0.016	0.064	0.129	0.385	1	0.271	0.231	0.052	0.119	-0.121
Previous year Sports Achievements	0.098	0.022	-0.102	0.059	-0.091	-0.047	0.271	1	0.401	0.274	0.037	0.280
Distance of institute from industry location	-0.121	-0.127	0.022	0.089	-0.027	0.128	0.231	0.401	1	0.637	0.074	0.300
Green Campuses	0.154	0.228	0.370	0.415	0.100	0.017	0.052	0.274	0.637	1	0.074	0.354
Performance and image of previous employees selected from same institute	0.242	0.260	0.283	0.202	0.124	0.276	0.119	0.037	0.074	0.074	1	0.191
Corona positive record	0.171	0.243	0.264	0.317	-0.010	0.067	-0.121	0.280	0.300	0.354	0.191	1

**Table II Bartlett's Sphericity Test (Source: EFA)**

Chi-square (Observed value)	228.088
Chi-square (Critical value)	85.965
DF	66
p-value (Two-tailed)	<0.0001

alpha

0.050

**Table III Kaiser-Meyer-Olkin measure of sampling adequacy (Source: EFA)**

NAAC Grades	0.722
NBA Rating	0.719
World Rankings	0.792
NIRF Rankings	0.763
Previous year Placement %	0.861
Previous year's student results	0.516
Previous year achievements in extracurricular activities	0.497
Previous year Sports Achievements	0.554
Distance of institute from industry location	0.595
Green Campuses	0.682
Performance and image of previous employees selected from the same institute	0.754
Corona positive record	0.718
KMO	0.706

2.3 On analysing anti-image correlation according to (Kastia, 2020), which is the individual KMO of each variable, it was observed that only one variable, the previous year's achievements in extracurricular activities, was less than 0.5, and the value was 0.497. According to (Kastia, 2020) if values are less than 0.6 then that variable can be excluded from factor analysis but in (K.Malhotra & Das, Factor Analysis, January 2015) 0.5 is cut off value so 0.5 is used for this analysis.

Table IV shows the factor loadings. Table V shows the communalities, which are the sum of the correlation squares between factors and variables for each variable horizontally, and the values should be greater than 0.5. If communality values are lower than 0.5, then they should be removed after examining the rotated component analysis according to (Nayak J. K., Courses>Management>NOC:Marketing Research and Analysis-II (Video)>Lec 51-53, 2018) . Table VI shows the Eigen Values: the amount of variance represented by factors and the Cumulative percentage variation shown by factors. Figure 5 shows the scree plot.



**Table IV Correlation between variables and factors or Factor Loadings (Source: EFA)**

	F1	F2	F3
NAAC Grades	0.768	-0.266	-0.043
NBA Rating	0.843	-0.289	-0.213
World Rankings	0.868	-0.175	-0.067
NIRF Rankings	0.882	-0.065	-0.149
Previous year Placement %	0.512	-0.234	0.376
Previous year's student results	0.331	0.039	0.750
Previous year achievements in extracurricular activities	0.146	0.299	0.721
Previous year Sports Achievements	0.129	0.663	-0.024
Distance of institute from industry location	0.168	0.860	0.055
Green Campuses	0.487	0.624	-0.233
Performance and image of previous employees selected from the same institute	0.399	0.028	0.266
Corona positive record	0.415	0.422	-0.343

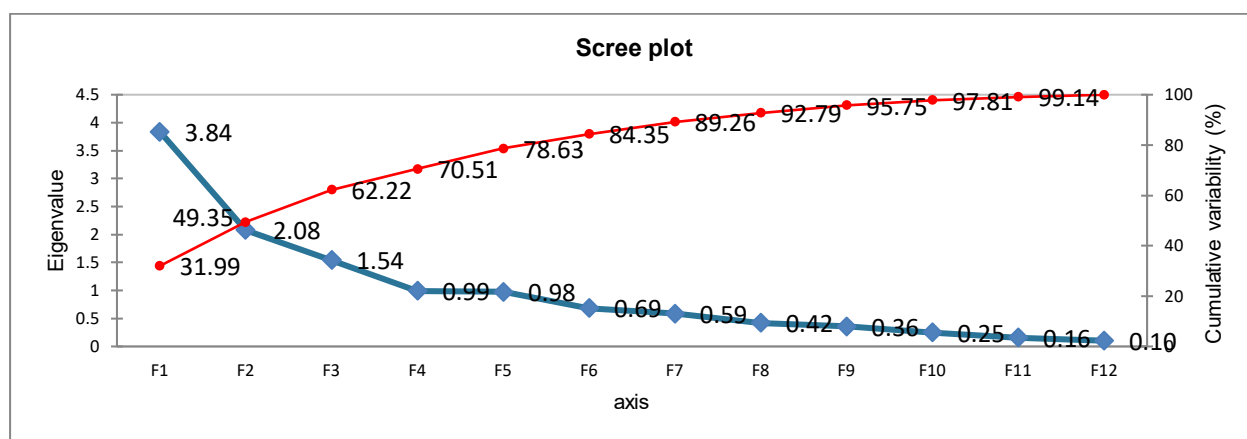
**Table V Communalities (Source: EFA)**

	F1	F2	F3	Communalities
NAAC Grades	0.591	0.071	0.002	0.663
NBA Rating	0.711	0.083	0.045	0.840
World Rankings	0.753	0.031	0.005	0.788
NIRF Rankings	0.778	0.004	0.022	0.805
Previous year Placement %	0.262	0.055	0.142	0.458
Previous year's student results	0.109	0.002	0.563	0.674
Previous year achievements in extracurricular activities	0.021	0.089	0.520	0.631
Previous year Sports Achievements	0.017	0.440	0.001	0.457
Distance of institute from industry location	0.028	0.740	0.003	0.772

Green Campuses	0.237	0.389	0.054	0.681
Performance and image of previous employees selected from the same institute	0.159	0.001	0.071	0.231
Corona positive record	0.172	0.178	0.117	0.468

**Table VI Eigen Values and Cumulative Variability Percentage (Source: EFA)**

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
Eigenvalue	3.84	2.08	1.54	0.99	0.98	0.69	0.59	0.42	0.36	0.25	0.16	0.10
Variability (%)	31.993	17.357	12.873	8.283	8.127	5.714	4.911	3.530	2.966	2.059	1.329	0.857
Cumulative %	31.99	49.35	62.22	70.51	78.63	84.35	89.26	92.79	95.75	97.81	99.14	100.00



**Figure 5 Scree Plot (Source: EFA)**

2.4 The methods used to find out the number of factors according to (K.Malhotra & Das, Factor Analysis, January 2015) include “The **Priori Determination Method** (prior knowledge )”, “**Eigen Values Method** (EV>1)”, “**Scree Plot Method** (Eigenvalues are plotted against the number of factors )”, “**Percentage of Variance Method** (Extracted Factors should represent at least 60 per cent of the variance)”, “**Split Half Reliability Method** (Factors are split in half and on each half the factor analysis is performed, Factors with high correspondence of factor loadings across the two subsamples are retained )” are **Significance Test Method** ( Determines the statistical significance of the separate Eigenvalues and retains only statistically significant factors).

No theory is available based on which an employer selects an institute for campus placements. However, in promoting environment-friendly practices, an employer might

prefer a green campus (campuses that practice environment-friendly practices) or maybe an institute promoting sports for overall development. Out of the five methods, values based on three methods, Eigen Values, Scree Plot method, and Percentage of Variance, are available using XLSTAT, and the number of factors extracted is 3,4,3, respectively.

2.5 Varimax rotation was applied to better distribute factor loadings or avoid 1 factor loading into 2 to 3 factors. Table VII and Table VIII show the variance after Varimax rotation and the rotated component matrix, and it highlights that factor D1 is highly correlated with “NBA Rating”, factor D2 is highly correlated with “Distance of institute from industry location”, and factor D3 is highly correlated with “Previous year achievements in extracurricular activities”. The variables “Previous year Placement %” and “Performance and image of previous employees selected from the same institute” are not significantly correlated with any of the factor components as highlighted in yellow and hence should be deleted.

**Table VII % of variance after Varimax Rotation (Source: EFA)**

	D1	D2	D3	F4	F5	F6	F7	F8	F9	F10	F11	F12
Variability (%)	29.666	18.363	14.195	8.283	8.127	5.714	4.911	3.530	2.966	2.059	1.329	0.857
Cumulative %	29.666	48.029	62.224	70.507	78.634	84.348	89.259	92.789	95.754	97.814	99.143	100.000

**Table VIII Correlation linking variables and factors after varimax rotation (Source: EFA)**

Variables	D1	D2	D3
NAAC Grades	0.805	-0.020	0.119
NBA Rating	0.916	0.016	-0.028
World Rankings	0.872	0.099	0.133
NIRF Rankings	0.866	0.223	0.074
Previous year Placement %	0.474	-0.150	0.459
Previous year's student results	0.143	-0.025	0.808
Previous year achievements in extracurricular activities	-0.107	0.171	0.768
Previous year Sports Achievements	-0.093	0.662	0.100
Distance of institute from industry location	-0.137	0.841	0.211

Green Campuses	0.292	0.771	-0.015
Performance and image of previous employees selected from the same institute	0.306	0.085	0.360
Corona positive record	0.314	0.585	-0.165

2.6 Table IX and Table X show that the null hypothesis is rejected as the p-value in the case of Bartlett's Sphericity Test is less than 0.05, and the KMO value is more significant than 0.6, so factor analysis can be used as a technique for analysing the revised correlation matrix.

**Table IX Revised Bartlett's Sphericity Test after deletion of 2 variables (Source: EFA)**

Chi-square (Observed value)	210.946
Chi-square (Critical value)	61.656
DF	45
p-value (Two-tailed)	<0.0001
alpha	0.050

**Table X Revised Kaiser-Meyer-Olkin measure of sampling adequacy after deletion of 2 variables (Source: EFA)**

NAAC Grades	0.694
NBA Rating	0.708
World Rankings	0.769
NIRF Rankings	0.758
Previous year's student results	0.416
Previous year achievements in extracurricular activities	0.459
Previous year Sports Achievements	0.539
Distance of institute from industry location	0.593
Green Campuses	0.679
Corona positive record	0.726
KMO	0.679

2.7 The factor loadings after the deletion of 2 variables were obtained. NAAC Grades, NBA rating, Previous year achievements in Extra extracurricular activities, Green Campuses, and the Corona positive record were loaded in multiple factors. After the deletion of 2 variables, the commonalities table showed that for variables named “Previous Year Sports Achievements “and “Corona Positive Record “, commonalities are less than 0.5 and hence will be considered for deletion if these variables are not loaded into different factors after varimax rotation. Table XI and Table XII show Eigenvalues and % variability for ten variables before and after varimax rotation, which led to the interpretation that three factors will explain 69.55% of the variation.

**Table XI Eigenvalues and % variability after deletion of 2 variables (Source: EFA)**

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
Eigenvalue	3.51	2.05	1.40	0.96	0.77	0.44	0.36	0.25	0.16	0.11
Variability (%)	35.13	20.48	13.95	9.58	7.69	4.38	3.65	2.48	1.61	1.07
Cumulative %	35.13	55.60	69.55	79.13	86.82	91.20	94.85	97.33	98.93	100.00

**Table XII Eigenvalues and % Variability for 10 variables and after varimax rotation (Source: EFA)**

	D1	D2	D3	F4	F5	F6	F7	F8	F9	F10
Variability (%)	33.128	21.828	14.596	9.577	7.693	4.377	3.648	2.481	1.607	1.065
Cumulative %	33.128	54.956	69.552	79.129	86.822	91.199	94.847	97.328	98.935	100.000

2.8 Table XIII shows that “NAAC Grades”, “NBA rating”, “World Rankings”, “NIRF Rankings” load into 1<sup>st</sup> factor, “Previous year student results” and “Previous Year achievements in extracurricular activities” load into 3<sup>rd</sup> factor and “Previous year sports achievements”, “Distance of institute from Industry Location”, “Green Campuses” and “Corona positive record” load into the 2<sup>nd</sup>-factor component and none of the variables are distributed in more than one factor.

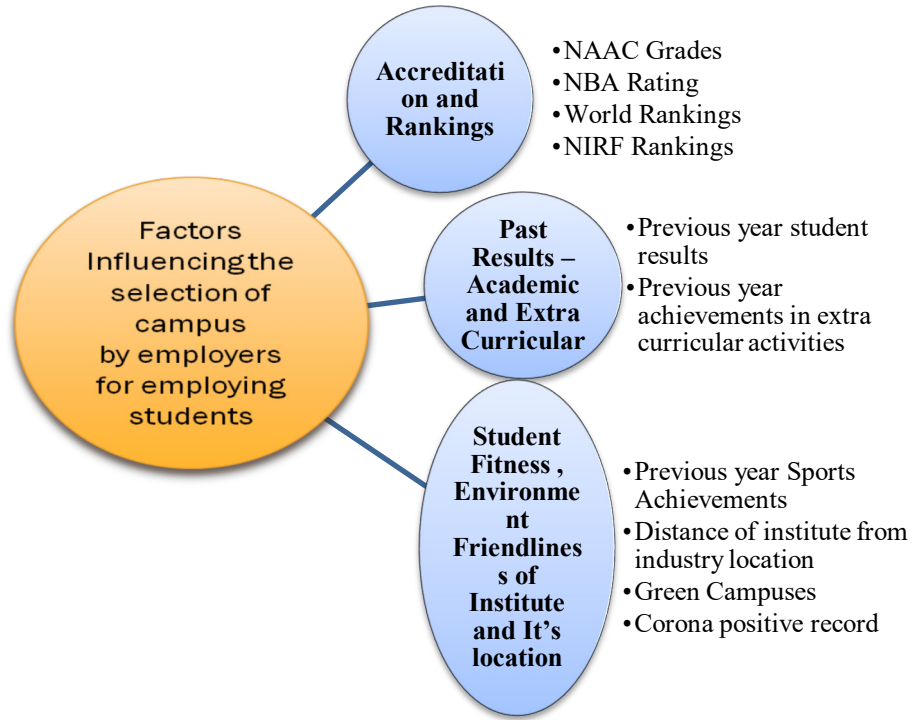
**Table XIII Correlation between variables and factors after final Varimax Rotation**

(Source: EFA)

	D1	D2	D3
NAAC Grades	0.825	-0.042	0.124
NBA Rating	0.923	-0.003	-0.045
World Rankings	0.881	0.098	0.077
NIRF Rankings	0.878	0.218	0.047
Previous year's student results	0.188	-0.016	0.765
Previous year achievements in extracurricular activities	-0.036	0.147	0.858
Previous year Sports Achievements	-0.076	0.644	0.158
Distance of institute from industry location	-0.129	0.854	0.193
Green Campuses	0.289	0.785	-0.048
Corona positive record	0.300	0.584	-0.223

## Conclusion

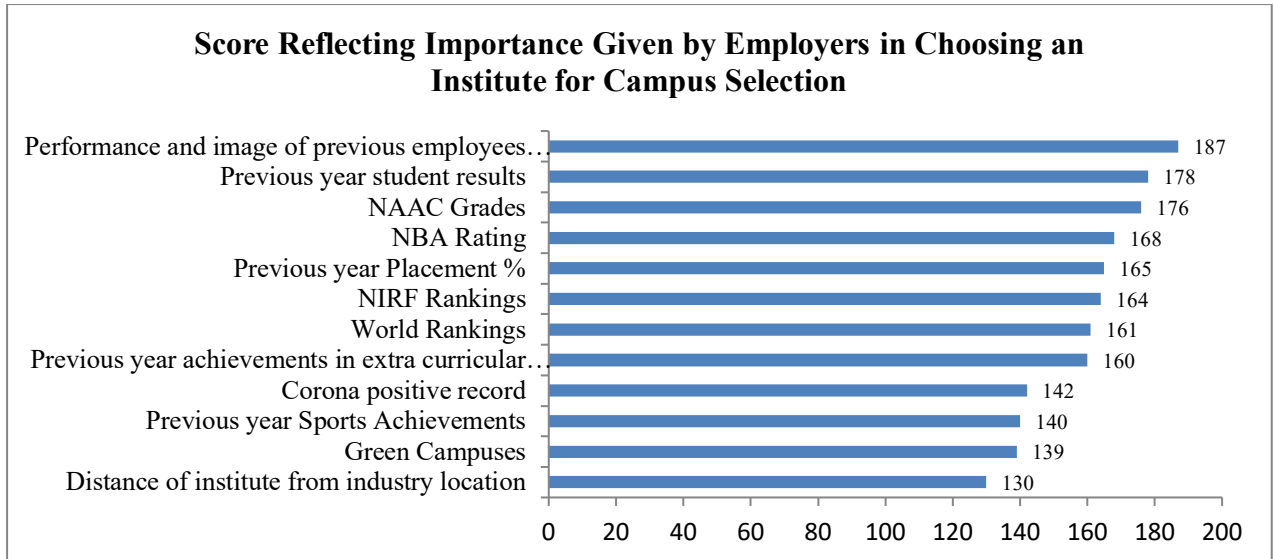
1. The First Factor is called “Accreditation and Rankings “,2nd factor is named “Past Results – Academic and Extra Curricular “, and 3rd factor is named “Student Fitness, Environment Friendliness of Institute and Its Location”, as shown in Figure 6.



**Figure 6 Model after Exploratory Factor Analysis (Source: EFA)**

2. The reliability of the three factors was evaluated using the Chronbach alpha method, and it came out to be 0.907 for factor 1, 0.556 for factor 2, and 0.689 for factor 3. Hence, the slightest variation in the opinion of employers was observed in factor 1, followed by factor 3 and then factor 2.

3. The top 5 variables that affect the Employer’s opinion in choosing an institute for campus selections are shown below in Figure 7 and “Performance and Image of previous employees”, “previous year student results”, “NAAC Grades”, “NBA Ratings” and “Previous Year Placement %”, “NIRF” and “World Rankings” matter more to employers.



**Figure 7 Score Reflecting Importance Given by Employers in Choosing an Institute for Campus Selection (Source: (Chaturvedi & Rai, 2020))**

### Implications

1. The study can be used to formulate a strategy by an institute to attract employers to campus by improving the institute's performance in formulated factors Accreditation and Rankings, Past Results – Academic and Extra Curricular, Student Fitness, and Environment Friendliness of the **Institute. Location cannot be changed easily as huge investments are required, so the institute can focus on marketing its achievements and building relations to attract employers.**

2. The factors also address the issue of Environment Friendliness through the variable Green Campuses and New World Order after the pandemic through the variable Corona Positive Record. A smaller number of COVID-positive cases indicates robust demonstration and adoption of COVID-19-appropriate behaviour by the institute, and a reduction in CO2 emissions indicates a Green Campus.

### Future Research Directions

1. Sector-wise, each employer requires a different set of skills. Hence, it will be interesting to map the sector-wise variation in the importance factor given by employers while choosing an institute for campus selection. Different factors contribute to different development (physical, social, mental, and spiritual).



2. Discovering the factors influencing Job Profile and Employer Size will be interesting. For example, large, small, and medium-sector employers expect their employees to hold different job profiles, which blend different responsibilities and require different skills.

3. Confirmatory factor analysis should be done to approve the model and spread it worldwide for use.

4. EFA can also be done to determine which factors influence MBA students in choosing an institute for studying an MBA program.

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## Emotional Distress and Identity Fear in Octavia Butler’s “Speech Sounds”

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### Abstract

Octavia Butler’s “Speech Sounds” portrays the after-effects of the global pandemic in a dystopian society. The people of Los Angeles are in a crumbling situation with the loss of speech and other specific skills. Rye is the protagonist who has lost her family in this crisis and is on the way to her brother’s house in Pasadena. The paper deals with the emotional distress and identity fear of the disturbed individuals and the social disorder. They are affected by environmental factors like materialistic discomforts, impaired disabilities, and violent traits of affected individuals. Even Rye is always found with a gun for her safety, though she does not want to hurt anyone. This short story brings to the reader specific details of a day in the life of Rye and her meeting with Obsidian with sudden twists and an unexpected climax to the plot. She begins the day all alone and later is happy with the company of a kind man but loses him and ends up taking two little children who can utter words. When silence has become a deadly illness wiping out the peace of society, Rye grows hopeful when she finds those two children with clear pronunciation.

**Keywords:** Communication, disability, illness, pandemic, silence, violence

“Speech Sounds” (1983), the short story of Octavia Butler, was published in Asimov’s Science Fiction Magazine, for which she was awarded the first Hugo Award for Best Short Story in 1984. The articulation of speech sounds determines the ability of one’s communication, and it is an ordinary skill of a person in day-to-day life. Breaking the monotonous lifestyle, the severe pandemic in society has brought shocking repercussions. In Los Angeles, Rye, the protagonist of the story, has lost her husband, children, and parents.

She had lost reading and writing, her most serious impairment and her most painful.

She had taught history at UCLA and done freelance writing. Now, she could not even

read her own manuscripts. She had a houseful of books that she could neither read nor bring herself to use as fuel. And she had a memory that would not bring back to her much of what she had read before (Butler 84).

Despite losing relationships, the survivors were deprived of the ability to read, write, and speak. “And in this world where the only likely common language was body language, being armed was often enough. She had rarely had to draw her gun or even display it” (Butler 80).

Symbols and gestures have become the medium of communication. “People screamed or squawked in fear. Those nearby scrambled to get out of the way. Three more young men roared in excitement and gestured wildly” (Butler 78). In such a scenario, people grew disappointed in their shortcomings and were jealous of other’s abilities. Even if one possessed the skill to speak or read, they were forced to hide the ability, as violence was rampant in and around the ruined society. “Language was always lost or severely impaired. It was never regained. Often there was also paralysis, intellectual impairment, death” (Butler 82). Henceforth, the paper analyses the emotional distress and fear of people forced people to hide their ability and identity through their experiences after the illness.

When one is affected by environmental, financial, psychological, social, or economic factors, one's emotions will be imbalanced. Emotions are the mirror of the mind, and here, the protagonist, Rye, has been all alone for three long years, having lost her three children and husband.

The illness had stripped her, killing her children one by one, killing her husband, her sister, her parents... The illness, if it was an illness, had cut even the living off from one another. As it swept over the country, people hardly had time to lay blame on the Soviets (though they were falling silent along with the rest of the world), on a new virus, a new pollutant, radiation, divine retribution... The illness was stroke-swift in the way it cut people down and stroke-like in some of its effects. However, it was highly specific (Butler 82).

The disease has had a massive impact, leaving the survivors with the disability to speak, read or write. Facial and body gestures are substituted in the place of speech sounds, and mundane conversation is suddenly reduced to mere signals. Rye feels that “she would never hear her

name spoken again” (Butler 83). This situation has forced survivors to protect their lives from the eyes of jealousy, violence, and protest. Anarchy was let loose in society and the place was no more a paradise as it was before.

No government was in function, and murder, teasing, and violence became a part of survival. “Loss of verbal language had spawned a whole new set of obscene gestures” (Butler 81). The identity of a person determines the beliefs and principles, and normally, a person would be proud to represent the talents. “Identities are relatively stable, role-specific understandings and expectations about self” (Wendt 397). On the contrary, the affected survivors of the pandemic conceal their speaking or reading skills to save their lives.

Thus, the survivors with mere ability to read or write have to hide their skills because they may become the victim of violent behaviour. People possess a fear of identity - “Identity refers to the ways in which individuals and collectivities are distinguished in their social relations with other individuals and collectivities” (Jenkins 4) and to quote, even Rye grew jealous when she found Obsidian’s reading skill as she has lost it. “He could probably write, too. Abruptly, she hated him— deep, bitter hatred. She felt sick to her stomach with hatred, frustration, and jealousy. And only a few inches from her hand were a loaded gun” (Butler 84).

The other notable positive character is Obsidian, who tries to protect the weaker ones. “His use of the left hand interested Rye more than his obvious question. Left-handed people tended to be less impaired, more reasonable and comprehending, less driven by frustration, confusion, and anger” (Butler 79). He even broke up the fight on a bus and offered Rye a ride in his car. After three long years of loneliness, Rye and Obsidian made love. They decided to stay together but Obsidian lost his life in his attempt to save a woman from the attacker. “The bullet caught Obsidian in the temple and he collapsed. It happened just that simply, just that fast. An instant later, Rye shot the wounded man as he was turning the gun on her. And Rye was alone—with three corpses” (Butler 89). Rye stood still as everything happened in a minute, and then her confusion and hopelessness changed into a meaningful life.

The atmosphere of the story carries lot of meaning reflecting the disturbed psyche and anarchy of the pandemic affected society. Though it is just 30 minutes from Washington to Pasedana, it is mentioned that Rye calculates it would take at least a full day to reach the destination for

such is the plight of the people. When Obsidian and Rye travel by car, the author describes the boundaries of the wasteland.

As they passed blocks of burned, abandoned buildings, empty lots, and wrecked or stripped cars, he slipped a gold chain over his head and handed it to her. The pendant attached to it was a smooth, glassy, black rock. Obsidian. His name might Rock or Peter or Black, but she decided to think of him as Obsidian (Butler 83).

The emotional distress and fear of identity that has affected of Rye has resulted in loneliness, segregation, and huge misery. Meeting Obsidian was a blessing in disguise as she realised the value of life and the kindness of a person after three years. "She had experienced longing for the past, hatred of the present, growing hopelessness, purposelessness, but she had never experienced such a powerful urge to kill another person" (Butler 85).

The children of the present generation have lost a pleasant childhood where they were neither morally trained nor educated. The ill effects of the pandemic have wiped out the destiny of the younger generation. "Today's children gathered books and wood to be burned as fuel. They ran through the streets chasing one another and hooting like chimpanzees. They had no future. They were now all they would ever be" (Butler 86). This passage portrays the turmoil of the scenario where the innocence and education of a generation have been destroyed.

Despite the fact that Rye and Obsidian decide to take a chance at a new beginning in life, the latter got off the car to protect the woman from being attacked by a man. He carries a sense of responsibility in pursuing the morality and duty of protecting his society even though the police service was inactive. He ran after them to prevent murder. "He made the same sound over and over the way some speechless people did, "Da, da, da!" (Butler 88).

With shattered dreams in a minute, Rye overcomes the chaos by her decision to give Obsidian a decent burial. She was astonished by the clear speech of the two little children. Fluent speech! Had the woman died because she could talk and had taught her children to talk? Had she been killed by a husband's festering anger or by a stranger's jealous rage? And the children... they must have been born after the silence (Butler 90).

That was the point where the emotional distress and Rye's fear of identity were channelised into a clarity of hopeful thought. She decided that the disease had lost its effect and that these



children may be able to learn language. Like Obsidian, she protects the dead woman's children by saying, "I'm Valerie Rye," she said, savouring the words. "It's all right for you to talk to me." " (Butler 90). Even though Rye lost a good soul like Obsidian, Rye's three years of loneliness were substituted by the presence of two innocent children.

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**Women Agriculture Workforce's Educational Demand for Their Children-  
A Case Study of *Karbi Anglong* District (Assam)**

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**Abstract**

Karbi Anglong District of Assam is purely an agriculture-based district. The majority of the population of the district are from tribal communities. Women from almost all households are directly or indirectly engaged in agricultural work. The present study, "Women Agriculture Workforce's Educational Demand for their Children – A Case Study of *Karbi Anglong* District," is undertaken to shed light on the educational demand for children in the women's workforce. Agriculture is the district's primary source of earnings. Education is an essential tool for the development of any area. Regarding the district's literacy rate, a significant disparity was visible between males and females in the 2011 census. It is a matter of great concern because education is essential for human resource development and the district's development.

**Keywords:** Education, agriculture, demand, workforce, literacy rate

**Introduction**

Human capital formation plays a significant role in a country's economic development. Better education leads to higher individual income and is a necessary pre-condition for long-term economic growth (IIASA 2008). Three channels were suggested by the World Economic Forum 2016, through which a country's productivity can be affected. First, it increases the collective ability of the workforce to carry out existing tasks more quickly. Second, secondary and tertiary education facilitates the transfer of knowledge about new information, products and technologies created by others (Barro and Lee, 2010). Finally, increasing creativity boosts a country's capacity to develop new knowledge, products and technologies<sup>1</sup>.

## Definition of Education

Education is the stock of skills, competencies, and other productivity-enhancing characteristics' (WEF). It is a critical component of a country's human capital, increases each worker's efficiency, and helps economies move up the value chain beyond manual tasks or simple production processes (WEF 2016).

Primary Education:- the first stage of education, between early childhood and secondary education, is called primary education and is compulsory.

Secondary Education:- Started after six years of primary education and continues up to higher education, vocational training and employment

Tertiary Education The World Bank, for example, defines tertiary education as including universities and institutions that teach specific capacities of higher learning, such as colleges, technical training institutions, community centres of excellence, and distance learning centres<sup>2</sup>. Tertiary education generally starts after school completion and provides secondary education. It is also known as third-level and post-secondary education.

## Rural Women and Agriculture

After so many years of independence, India is still an agricultural economy with the engagement of more than half (54.6%) of the workforce in agriculture activities. The extensive involvement of women is noticeable in India's agricultural activities. From time immemorial, agriculture and

allied sectors have been the primary source of livelihood for rural people, including a significant share (80%) of economically active women. Rural women's engagement in agriculture, as opposed to urban women, is slightly higher. In all the agricultural value chain

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2. K4D Helpdesk Report (2017), "The Contribution of Education to Economic Growth." Catherine Grant, Institution of Development Studies.

## Research Problem

During my field survey in Karbi Anglong district (Assam) for my PhD study, I encountered various problems that most struck my mind: the pattern of education demand for their girl child by the women agriculture workforce participant. The involvement of women in

agricultural activity keeps them away from their homes for the majority of the day. Without a mother, their girl children usually take all the household responsibilities. So they need more time for education and other activities for their all-round development. Again, the income pattern of parents affects their attainment of education. My idea to study the income and education demand patterns also comes from a journal paper written by Jyotismita Goswami named “Educational Demand For Children by Rubber Growers of *Karbi Anglong* District of Assam (India)- A Case Study.”

### **Objective of the Study**

The purpose of this study is to study the relation between the household incomes of women workforce participants and their demand patterns for education for their girl children.

### **Research Gap**

Various research works have been conducted earlier based on the educational demand of any particular workforce for their children. Hare's study considered the educational demand for girls and children by women in the agriculture workforce. A study considering girls' educational demands is yet to be available. Therefore, the present study will help us understand various unknown facts and provide us with the scope to think differently and face new probable circumstances.

### **Literature Review**

Literature on educational demand for girls arises from the relationship between parents' income and their educational demand, parents' education and its relation to their attitude towards girls' education, and social attitude towards girls' education attainment.

Dreze and Kingdon (2000) supported the correlation between the parent's attitude towards girl child education and girls' education attainment in their paper *School Participation in Rural India* by examining The Public Report on Basic Education in India (PROBE) survey results.

Miller K Sheila (2007) mentioned the impact or relation of various factors like socio-economic characteristics, caste, marriage prospects, household wealth, and the educational attainment of female children. The researcher used the probit model to prove the hypothesis.

Goswami Jyotismita (2016) examined the demand pattern of education by rubber growers for their children. The researcher used the Chi-square test to check the hypothesis. The study established the relationship between the occupational security of parents and female education.

### Methodology

Both primary and secondary data have been used in the study. Various published sources were used for the secondary data research department website. A questionnaire was prepared to collect primary data, followed by an interview method. A total of 100 households were selected randomly for collecting information. Out of 100 households, 210 students were chosen as the sample size. Simple statistical procedures and percentage tables were used to analyse the data.

### Findings of the Study

Households were divided into three groups depending upon their monthly income: Small Income Group (SIG), Medium Income Group (MIG), and Large Income Group (LIG). Out of 210 students, 101 were female students, of whom 54 were from SIG, 28 were from MIG, and 19 were from LIG. Again, education attainment is also divided into three groups: primary level, Upper Primary level, and Graduation and above. The following table represents the education of girl children with their household income.

Household Income and Educational Demand for Girl Child

Households	Attainment of Education (in percentage)			Total
	Primary	Upper Primary to HS level	Graduation and above	
SIG	43 (79.63%)	6 (11.11%)	5 (9.26)	54 (53.47 %)
MIG	5 (17.86%)	17 (60.71%)	6 (21.43%)	28 (27.72%)
LIG	1 (5.26%)	3 (15.79%)	15 (78.95%)	19 (18.81%)
Total	49 (48.51)	26 (25.74%)	26 (25.75%)	101 (100%)

Source: Field survey

The monthly income of the SIG category ranges between Rs 10000 and Rs 20000, MIG income is from Rs. 20000 up to Rs. 40000, and LIG's monthly household income is Rs 40000 and above. The above table shows that the majority (79.63%) of the girl children from the SIG category attained only primary education. In contrast, the majority (60.71%) of the MIG category girl children attained upper primary to HS level. On the other hand, the majority of the female children from the LIG category attained a graduate degree or above. We can also observe that out of 101 female children, the majority (48.51%) have only achieved primary education. I want to mention here that some exceptions were visible during the field survey, which were totally because of willingness. Attaining education is also a matter of willingness. Therefore, here, we only considered those students who were willing to achieve education and the impact of their household income on their desire.

## Conclusion

Various factors affected the educational demand of parents for their girls' children. Though the engagement of women in any economic activity increases household income, which has a positive impact on one hand, on the other hand, the absence of a mother at home increases the chance of girls' involvement in household work at a very early age. The patriarchal society also negatively affects educational demand, especially in rural areas.

The government has started schemes such as *Beti Bachao Beti Padhao*, *Sukanya Samridhi Yojana*, and Scheme for Adolescent Girls to provide opportunities for higher education and women empowerment. However, implementing such schemes in rural areas like *Karbi Anglong* was complex. People need to be made aware of such facilities. Government awareness programmes should be organised, especially in rural areas.

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**Women's Health and Economic Conditions in Post-Pandemic Era: A Study  
on SC Member SHGs in Assam, North East India**

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**Abstract**

The economic conditions of many countries were pushback due to the Covid-19 outbreak. Almost 85% of households' income status around the World was affected by this outbreak. The middle- and lower-income groups are suffering from this pandemic and thereby worry about their financial lives in India. Along with the households in India, the members belonging to SC communities are also struggling with their livelihood, mostly in rural areas of Assam. In this background, the researcher has attempted to know the household consumption of women SC-SHG members in terms of their economic and health conditions in rural and flood-affected areas of Assam. For this purpose, the researcher used primary and secondary information. The primary facts were gathered from 120 Households of SC-SHG members covering the development Blocks of Dhemaji, Majuli and Lakhimpur district of Assam. Maintaining a social distance, primary information was collected using personal interviews and observation methods as suggested by our government. The result of the study interpreted that the COVID-19 outbreak has reduced the average spending on the usage of food items in every household in addition to the average spending on non-food items in every household in rural areas.

**Keywords:** Covid-19, Economic & Health Status and SC Communities and Women

**1. Introduction**

The COVID-19 situation has adversely affected the fiscal condition of the Earth. The price rise, unemployment, and closure of many schools are the major issues many developing and underdeveloped countries face during this pandemic. Similarly, the Indian economy has also suffered adversely and been badly affected. It is to be reiterated that the fiscal and



psychosocial impacts of the Corona pandemic have affected all segments of India's population. The most affected are the weaker section groups of people existing under the line of poverty, particularly the poor rural women, children, elderly and migrant workers. Lockdown limits framed by the government are aimed at controlling the increase of Coronavirus among the financially affected people. Among these, persons with unstable incomes, day labourers, migrants, etc., are mostly affected (*Amrita News, 2020*). As we know, since independence, the poverty problem has created a depressing issue for the continuous growth of our country (Prabhala et al., 2019). Forest and flood-prone areas mainly include such poverty, particularly covered from the eastern part of Uttar Pradesh to the plains of Assam. It is observed that many of the vulnerable are still dispossessed of their basic living needs, including education, housing, health, food, justice and equity, employment, and social security. But, the lockdown due to Covid-19 adds to vulnerability and economic deprivation. The middle and lower-income groups suffer from this pandemic and worry about their monetary life in India. Along with the households in India, the members of the SHGs also struggle with their livelihood, mostly in rural areas. In this background, the researcher has tried to analyse the household consumption of women SHG members in terms of their health situation and economic condition in rural and flood-affected areas of Assam.

## 2. Objectives

- ❖ To look at the profile of the SC-women SHGs and their members
- ❖ To study the effect of the Corona outbreak on the health & hygiene care of SC-member SHGs during and post-pandemic
- ❖ To investigate the effect of the Corona outbreak on food and non-food security of SC-member SHGs during and post-pandemic period

## 3. Literature Review and Research Gap

Aneja and Ahuja (2020) conducted a study on the implications of Covid-19 on India's society and economy. They revealed the disproportionate effect of all sectors of the Indian economy and the occurrence of loss. Society has suffered from job loss, mental sickness, high domestic violence, and crime. Despite the adverse effects, better air, water, and wildlife quality are some of the positive impacts observed in the study.

Bhattacharya and Banerjee (2021) studied indices of health and economic vulnerability in India. They revealed a high-risk factor of COVID-19 among the states of Uttar Pradesh, Assam, Bihar, Jharkhand, and Madhya Pradesh according to all the indices during the pre-COVID-19 and post-COVID-19 periods. States like Maharashtra, West Bengal, Haryana, and Odisha have higher post-COVID-19 indices of health vulnerability (HVI) than the pre-COVID-19 HVI.

Gogoi & Sarmah (2020) conducted a mental health study in Assam and found that the residents of the state have a high risk of psychological impact, and most of the people have lived indoors during the pandemic. The study also revealed that the population of Assam has unhappiness, worry, and stress, which was more in comparison to the National Mental Health Survey of India's 2016 findings.

Sarkar and Chouhan (2021) made a district-level socio-environmental vulnerability assessment using principal element analysis to determine the probable risk of the spread of the COVID-19 virus in India. They revealed a spatial changeability in vulnerability based on ecological and socio-economic circumstances, and the resulting index of vulnerability highlighted backward districts both environmentally and socio-economically.

Sharma, Thomas, and Paul (2021) pointed out the resilience-based framework for refreshing the comprehensive tourism industry badly affected by Covid pandemic. They mentioned the government's responses, skill innovation, resident belongingness, and level of confidence among consumers as the four factors of a framework for building resilience.

Mukherjee et al. (2020) observed during the COVID-19 pandemic, scarcity, possible interruption of healthcare access for chronic diseases, access to conservatory edification and MDM, and sickness occurred due to the use of alcohol and also domestic violence.

Mishra, Gayen & Haque (2020) observed the factors at the sub-city level that may materialise social distancing and lockdown in metros like Delhi, Kolkata, Mumbai, and Chennai.

The studies have focused on health and vulnerability in many states of India but do not focus on women in general and the members of SC communities in particular. Thus, the present paper has been framed.

#### 4. Hypothesis of the Study:

During the present study, the following hypotheses were tested by the researcher:

- ❖ Covid-19 Pandemic situation has not affected food security before and during the lockdown period among the women SC members of SHGs.
- ❖ The COVID-19 pandemic has not affected the non-food expenditure pattern among the SC-women members of SHGs before and during the lockdown period.

#### 5. Methodology:

As a flood-affected area of upper Assam, the researcher has purposefully selected the Dhemaji, Lakhimpur, and Majuli districts concerning the fiscal situation of poor households in rural areas during the COVID-19 outbreak. Primary and secondary information were gathered for the study. Journals searching through the internet, magazines, source documents, websites and newspapers were used to collect the secondary data. Primary information was collected at the six development blocks in Assam's Dhemaji, Lakhimpur, and Majuli districts by searching 120 households of women SC-SHG members. The researcher used the personal interview method to assemble the primary data by following the Covid Protocol and maintaining the physical distance guideline suggested by the administration. The researcher used a simple average method, per cent analysis, and descriptive statistics like the F-test to process the data.

#### 6. Observation and Findings:

##### *6.1 Distribution According to Engagement and Source of Income of the Head of Household:*

The Researcher has attempted to learn the different engagements and the sources of income of the head of household of the women members of SHGs under the study area.

Table 1 shows the relevant data in this connection:

**Table 1**

**Head of Household According to Engagement and Source of Income**

Sl. No.	Type of Engagement	Frequency	Percentage
1	Every day Wage Worker	24	20.0

2	Vegetable Vendors	12	10.0
3	Meat Vendors	7	5.8
4	Fish Vendors	7	5.8
5	Milk Vendors	5	4.2
6	Hotel Boy	22	18.3
7	Barber	7	5.8
8	Private Employee	10	8.3
9	Tiny Shop	11	9.2
10	Farmer	15	12.5
	<b>Total</b>	<b>120</b>	<b>100.0</b>

*Source: Collected from a field study.*

The study found that most of the respondents' households, i.e. 20 per cent, have engaged themselves as everyday workers and earn money for their home in the district under study. 18.3 per cent were engaged as hotel boys as a source of income for their family, which was followed by the farmers (12.5 per cent), Vegetable vendors (10.0 per cent) and Tiny shops/Businesses (9.2 per cent each), Private employees in different wholesaler and retail shops (8 per cent), Meat Vendor, Fish Vendor and Barber (5.8 Per cent each) and Milk Vendor (4.2 per cent).

### **6.2 Distribution of Respondents According to Nature of Family:**

**Table 2** reflected the data in connection to the nature of the family of the respondents:

**Table 2**  
**Table Showing Nature of Family**

Sl. No.	Variable	Frequency	Percentage
1	Small & Nuclear Family	44	36.7
2	Joint Family	76	63.3
	<b>Total</b>	<b>120</b>	<b>100.0</b>

*Source: Collected from a field study.*

The study found that almost 63.3 percent of women represented joint families. On the other hand, the remaining 36.7 percent belonged to small and nuclear families in the district under study.

### **6.3 Daily Income Position of the Respondents:**

**Table 3** shows the data in connection to the daily income position of the women member SHGs household before and during the lockdown period as follows:

**Table 3**  
**Daily Income Position of the Respondent's Household**

Sl. No.	Variable	Before Pandemic	During Pandemic
1	Less than Rs. 100/-	0 (0.0)	22 (18.3)
2	Rs. 101 – Rs. 300/-	4 (3.3)	48 (40.0)
3	Rs. 301 – Rs. 500/-	32 (26.7)	24 (20.0)
4	More than Rs. 500	84 (70.0)	26 (21.7)

**Source:** Collected from a field study.

**Note:** () indicates the percentage of the respondents.

Analysis of the Study (**Table 3**) found that around 70% of households earned Rs. 500/- and above a day earlier than the lockdown period, but it was only 21.7% at the time of the survey. It showed a 48.3 per cent decrease in their household income per day. The majority of the respondents, i.e., 40 per cent of households, could gain daily takings between Rs. 101/- and Rs. 300/-, which was less than enough for their livelihood. It creates difficulty for them with that limited source of earnings and thereby runs the household expenses. The daily income decreased gradually during this pandemic period. 18.3 per cent earned less than Rs. 100/- in the district understudy. Thus, the financial situation of the household women was found to be highly deprived in this outbreak situation in the area under study.

#### **6.4 Food Consumption Style of the Respondents (on a weekly basis):**

**Table 4** shows the relevant data in connection to the food consumption style of the households of the respondents:

**Table 4**  
**Food Consumption Style of Households (Rupees per week)**

S. No.	Elements	Pre-Lockdown Period		Post-Lockdown Period	
		Rs.	Per cent	Rs.	Percent
1	Rice	2680	3.2	1200	4.0
2	Sugar	4520	5.4	1512	5.1
3	Wheat	9320	11.1	2300	7.7
4	Grocery	15120	18.0	3320	11.1
5	Kerosene	9600	11.4	8544	28.6
6	Vegetables	15216	18.1	5760	19.3
7	Non-vegetables	24480	29.1	6640	22.2
8	Fruits	3200	3.8	610	2.0
	<b>Total</b>	<b>84136.00</b>	<b>100.00</b>	<b>29886</b>	<b>100.00</b>
	<i>Average per households</i>	<i>701.13</i>		<i>249.05</i>	

*Source: Collected from a field study.*

The analysis of the study found that the food consumption pattern of the household declined to Rs. 249.05/- from Rs. 701.13/- in a week on an average expenditure basis during the pandemic period. During this period, it was also found that only 2 per cent of households could buy fruits in their families. The decline in the day-after-day earnings of women member households during the lockdown stage was the main reason for that. On the other hand, Kerosene users increased under the study area from 11.4 per cent to 28.6 per cent during the pandemic.

Again, to find the effect of the COVID-19 pandemic on Food protection in the household, the following null hypothesis is taken into consideration:

*H<sub>01</sub>: The COVID-19 pandemic has not affected food security before and during the lockdown period among the women SC members of SHGs.*

**Table 5**  
**Descriptive Statistics**  
**(Impact on Food Consumption)**

Variables	Mean	S.D (σ)	Z-Value	Significance	Decision
Before Lockdown Period	10517	7477.86	<i>2.0523</i>	<i>0.05</i>	<i>Reject our</i>

After Lockdown Period	3735.75	2903.97			<i>Null Hypothesis</i>
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*Source: Compiled from field survey*

The standard curve table shows that:

$R: |z| > 1.96$  at a 5 per cent level of significance

Here, the observed value of  $z$  i.e. 2.0523 falls in the rejection region at a per cent significance level. Thus, the researcher has rejected our Null Hypothesis ( $H_0$ ) and concluded a significant distinction between the effect of COVID-19 on food protection among the households of the women SHGs during the pre-lockdown and post-lockdown period in the area under study. Thus, the food expenses in the respondents' households decreased after the lockdown period because of the COVID-19 outbreak in the area under study.

### 6.5 Non-Food Consumption Style of the Respondents (on a weekly basis):

**Table 6** shows the relevant data in connection to the non-food utilisation style of the households of the respondents:

**Table 6**  
**Non-Food Consumption Style of Households (Rupees per week)**

Sl. No.	Elements	Pre-Lockdown Period		Post-Lockdown Period	
		Rs.	Percent	Rs.	Percent
1	Recharging of Mobile Phone	4200	17.2	1500	10.1
2	DTH/Cable Recharge	5400	22.1	3000	20.1
3	Petro/Diesel	4800	19.6	1440	9.7
4	Personal Hygiene	6000	24.5	3336	22.4
5	Cleaning Products	2640	10.8	2400	16.1
6	First Aid Items, including Hand Sanitizers	1440	5.9	3240	21.7
	<b>Total</b>	<b>24480</b>	<b>100</b>	<b>14916</b>	<b>100</b>
	<i>Average per households</i>	<i>204.00</i>		<i>124.30</i>	

*Source: Collected from a field study.*

The analysis of the study also found that the non-food consumption pattern of the households declined to Rs. 124.30/- from Rs. 204.00/- in a week on an average expenditure basis during the pandemic period. During the pandemic, there was a tremendous improvement in

household consciousness about health and hygiene care. In this regard, the weekly expenditure on health and hygiene items increased from 41.20 per cent to 60.20 per cent during the pandemic. Concerning mobile and DTH Recharge spending and use of vehicles, the weekly expenditure decreased rapidly, as observed from the field study.

Again, to find the effect of the COVID-19 pandemic on the Non-Food expenditure style of the households, the following null hypothesis is taken into consideration:

***H<sub>02</sub>***: *The COVID-19 pandemic has not affected the non-food expenditure pattern before and during the lockdown period among the women SC members of SHGs.*

**Table 7**  
**Descriptive Statistics**  
**(Impact on Non-Food Consumption)**

Variables	Mean	S.D (6)	Z-Value	Significance	Decision
Before Lockdown Period	4080	1732.32	<b>2.0168</b>	<b>0.05</b>	<b><i>Reject our Null Hypothesis</i></b>
After Lockdown Period	2486	851.93			

*Source: Compiled from field survey*

The standard curve table shows that:

$R: |z| > 1.96$  at a 5 per cent level of significance

Here, the observed value of  $z$ , i.e. 2.0168, falls in the rejection region at a 5 per cent significant level and thus, the researcher has rejected our **Null Hypothesis ( $H_{02}$ )** and concluded a substantial distinction between the effect of COVID-19 on non-food utilisation style among the households of the women SHGs during pre-lockdown and post-lockdown period in the area under study. Thus, the non-food expenses in the households of the respondents decreased after the lockdown period because of the COVID-19 outbreak in the area under study. Interestingly, people are more alert about their health and cleanliness in households during the pandemic situation.

## **7. Recommendations:**

After analysis, the researcher has given the following recommendations:



- There is a need to help poor people and high-income groups overcome the financial crises during this pandemic.
- By following the COVID-19 protocol and maintaining social distancing, if possible, medically fit individuals have to come forward to help in their everyday work so that people experiencing poverty can generate income for their livelihood and fulfil at least the basic needs of their households.

## 8. Conclusion:

The COVID-19 outbreak has reduced the economies of many countries around the world. Every person suffers from this tragic situation. We must protect ourselves not only because of ourselves but also for our family and society. During the COVID-19 pandemic, the economic condition of poor families, particularly the households of SHG members, is more affected in both Assam's urban and rural areas. Many of them cannot even purchase the daily requirements for their households. Most people earning daily incomes have lost their daily work due to the lockdown. Even after the lockdown, many high-income groups of people have not been given the opportunity to those workers due to this pandemic. The study concluded that the decline in household income is due to the effect of the COVID-19 outbreak among BPL families. The findings of the study interpreted that the COVID-19 outbreak has reduced the average spending on the usage of food items in every household and the average expenditure on non-food items in every household in rural areas. The analysis of the study also concludes that society in rural areas was more aware and conscious about health and hygiene care in households during the coronavirus pandemic.

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## The Re-membering and Re-awakening of Pan in a Post-Pandemic World

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### Abstract

The word “pandemic”, deriving from the Greek word “pandemic”, meaning all people, refers to an uncontrollable force, novel to human knowledge, unleashed by unknown entities in pursuance of the physical and mental health of the growing human population. As Jungian theorists like Mary Wood have stated, a pandemic, symbolised by an invisible virus, a humanoid, refers to an organism's hybrid and everchanging structure that is suddenly set on challenging all norms placed intact by and for a complete human society. Pan, the ancient Greek God, also called the ugliest of the Olympian deities, part God and human, as a symbol of human and nature-mingled consciousness, ruled much of the prehistorical structures of art and culture, which was then replaced by the Western modernity with a single Apollonian consciousness and knowledge system (James Hillman). However, with the sudden introduction of such crisis-ridden times, the god theorists like Hillman, presumed to be dead, have been reckoned to challenge the alter ego of the pandemic, symbolised by “massive misinformation”. Rising from the ashes of a looming pandemic, spearheading a cultural movement as such, invoking the spirit of transdisciplinarity, we have the Greek god Pan, the spirit of interconnectivity and complexity riding and imbuing the ecological world with a sense of urgency, harking on a consciousness that bridges the defects of a monolithic culture, thereby embracing the marginal, indigenous forms of knowledge. This paper intends to throw light on the intricacies of a post-pandemic world as re-remembering and invoking knowledge, which is pan-induced knowledge in a manner which tends to replace multidisciplinary with transdisciplinarity.

**Keywords:** Jungian Studies, Post-Pandemic literature, Transdisciplinary Approach, Myth

Upon the pandemic's onset, everything thought to have been set in stone has been subject to erasure upon the changing of thoughts and ideas alike with the large-scale questioning of the Western mode of thinking, which has been previously conceived as a sure sign of modernity. However, what hangs like a shadow is the condition of people's cultural preferences, which has undergone a massive shift due to reasons impacted by Covid 19. According to theorists like Wendy Doniger, it takes a mythical analysis to study such a condition as that introduced by a humanoid, part human and part animal. It is part of human nature due to its parasitic existence, which calls into question the larger propagandist idea of “man becoming a world in itself”. With the advent of modernity, marked by a consciousness which has been explained by Jung as “all the gods have become diseases”, the internal and external man falling at odds with each other has created deep-seated friction between man and nature resulting in the former tending to the latter for one's selfish purposes.

These polytheistic deities, stand-ins for each aspect of Nature and nature, have become incorporated into our psyches where the repression of each has resulted in specific pathological and psychological conditions; for e.g., the repression of Dionysus results in schizophrenia. Towards the end of the 20<sup>th</sup> century, several focused studies on depth psychology resulted in the sudden remembering of the old gods who once ruled the psyche. However, such an ongoing project has shifted its weight to literature, which revolves around the sole axis of Apollonian dichotomies. Depth psychology intends to question this approach, especially in the light of the pandemic. The word ‘pandemic’ having derived from the Greek word ‘pandemic’ meaning “all people” or “all demons”, points to a collective reaction to any specific event or incident, which in this case is the large-scale spreading of the coronavirus.

With the moorings of enlightenment followed by the ideals of modernism, man has been in a constant state of amnesia, where the thought of man being “western, modern, secular, civilised and sane was celebrated over the primitive, archaic, mythical, magical and mad” (7) status of man, the savage being. Psychology, especially depth psychology, threw light on these aspects, initiating a certain séance to bring back, to reckon the gods, the most popular being Pan, the goat-footed god. The pandemic initiated such a séance, offering an oracular reflective space wherein each of us who delved into our respective unconscious rose with tangled hair and renewed vigour.

Pan, the Greek god born to Hermes and a nymph Diopè, is regarded as the ugliest of the Greek gods, upon the birth of whom, his mother fled in horror from a simple glance at the baby. The hairy, hooved appearance is one of Pan's constants from childhood and has remained throughout his life. Resting his properties on the phallus-driven goat nature, he is unpredictable, mobile, and ambiguous to the core. Moreover, his internal self is entirely in terms of the external self, often hinting at the god having attained fullness at birth. Upon his being taken to Mount Olympus, all the resident gods took a liking to the baby, which made him their favourite, especially Dionysus.

He who ruled Nature, Pan lived in the woodlands, hideouts, caverns and caves. He is the only god for whom temples were not built; offerings were presented in caves devoted to him. Popularly known as the god who resides in Arcadia, an ancient Greek pastoral land, it is a geographical place and a psychic space deep inside the dark recesses of the human mind. As Hillman says, “his original place, Arcadia, is both a physical and a psychic location. The "caves obscure" where he could be encountered (The Orphic Hymn to Pan) were expanded upon by the Neoplatonists as the material recesses where impulse resides, the dark holes of the psyche whence desire and panic arise” (23).

The name Pan, deriving from the Greek word meaning “all,” refers to this “all-ness,” which provides a sense of interconnectedness, understanding, and interpretation. It is also a hermetic paying tribute to his patron, Hermes, thereby embedding the young god into the cluster of godliness and divinity through a set of contradictory and ambiguous properties: “Pan reflects them all” (Calasso 124).

God of all nature, Pan personifies to our consciousness that which is all or only natural, behaviour at its most nature-bound. Nature-bound behaviour is, in a sense, divine; it is behaviour transcendent to the human yoke of purposes, wholly impersonal, objective, and ruthless. The cause of such behaviour is obscure; it springs suddenly, spontaneously. As Pan's genealogy is obscure, so is the origin of instinct. To define instinct as an inborn release mechanism, or to speak of it as a chthonic spirit, a prompting of nature, puts into obscure psychological concepts the obscure experiences that might once have been attributed to Pan. (Hillman xix)

On the level of consciousness, a pan experience refers to one that cheats even the most purposeful and wilful of actions, reinforcing a frenzy that quickly spreads among people

initially seen to have been fighting for a cause. The appearance of Pan in battle or an event induces panic on a mass scale, which can also be protective in nature, referring to the Janus-faced properties of Pan as both preserver and destroyer. However, the Pan of the study here is not the hairy, erected, roaming, goatish creature; it's a twin, an alter ego who is alone, reflective, the intuitive voice that talks to us, thereby invoking an inner experience. In the ancient Greek story of Ovid, when the helmsman announced that "The Great God Pan is dead", the dissociation between the two sides of the god as Nature and nature was in place. With the increase in the power and influence of Christianity and their notion of a single, apollonian God-induced consciousness, what one must realise is the breaking away of a culture previously in place that saw an intermingling of man and divinity in the same mould. As the embodiment of the wild and bountiful nature, the ex-situ Pan was *primarily coming into collision with in situ Pan, the god of the unconscious*, the dark recesses of the psyche. Relegating both to a status of imminent danger, the Pan archetype and the consciousness it evokes have been repressed. However, with the onset of the Pandemic, man has come face to face with this ancient god who seems to be walking amongst us in all its ancient glory.

The Great God Pan, the god of nature "in here" and nature "out there", has fallen out of coherence, often instigating man to dominate personified nature and his personified instinct with scientific temperament and logical reasoning to suit his purposes. Literature, which has mostly revolved around the Apollonian axis of dominant Western modes of thinking by sidelining archaic, indigenous modes of knowledge and being, has been questioned by psychology, prominently the depth psychology of Carl Jung. According to him, the modernist movements have alienated man further from nature, which has resulted in the dissociation of man into schizoid selves.

The pandemic caused by Covid 19 has platformed man's return to his innate self, scouring one's psyche for lost meanings of symbols, majorly myths. The latter, which has been used from pre-historic times to depict the cultural condition of a society, be it a disaster, war, or simply an event, has helped man figure out his position in the fulcrum of man-nature interconnectivity. The pan-nature filled with sexual excitation is also a bed of "subliminal panic", which, according to Brinkmann, the famous depth psychologist, is one of the proper reactions to the numinous. The panic signalled by the pandemic, which has given rise to an "infodemic" on a large scale, has also generated a large corpus driven by misinformation. Governmental agencies are controlling data, and this pandemic has provided a closer look at

the desperation of men in handling the coronavirus-induced pandemic. Man's bull-handedness in undertaking nature-related conservation activities has reawakened the God of nature from a deep slumber initiated by man's belief in his own Promethean abilities. The panic it has resulted in has become a way to reach the unconscious, the numinous and the uncontrollable, making man come in close contact with his preternatural self. Hillman says

When Jung said that we need to learn to fear again, he picked up the thread from the Old Testament, which states that the beginning of wisdom is the fear of the Lord and gave it a new twist. Now, the wisdom is that of the body that connects with the divine, as panic with Pan, with the same intensity as described in the sexual visions of Saints. Where panic is, there too is Pan. When the soul panics, as in the story of Psyche's suicide. Pan reveals himself with the wisdom of nature. To be fearless, without anxieties, without dread, and invulnerable to panic would mean a loss of instinct and connection with Pan. (xxxix)

“Dionysian dismemberment”, one of the critical aspects of Depth Psychology, is synonymous with Pan-centred consciousness wherein each aspect of the human psyche becomes a microcosm of a specific god. A colossal event of manifold proportion, like the spreading of the Coronavirus, has initiated a shift in the present mode of thinking, wherein Western models of learning were vindicated over the indigenous and marginalised forms of knowledge. The latter, largely nature-centric, is foregrounded in time-tested pantheistic structures of knowing and being.

Just as Pan blew the Pan pipes to eradicate panic, similarly, in several places worldwide, we saw people coming together at least metaphorically to dispel the corona-induced panic through the music they sang from their balconies. The time spent indoors mostly ridden over panic, thereby giving space for self-reflection, has activated the ultimate element of Pan consciousness: imagination. Resorting to reading and writing, riding on the wings of the imaginal faculty, we have crossed continents and travelled across time. The pandemic and its indefiniteness shall be preserved only through literature and books, which are the prime channels for our minds to cross over pan realms by which he has been released into nature and nature (human). With the decrease in pollution, more migratory birds travelling for mating, and the daily chirpings and movements of tiny animals around the homes, the return to a pan-induced consciousness is initiated.



Pan, the bridging element to nature and psyche, enables us to enjoy ourselves with nature. He brings together the objective processes with the subjective matter. He is also “the now and there”, the inside and the outside. Calasso says, “It is as if Pan is the answer to the Apollyonic question of self-knowledge”. What Susan Rowland calls “tacit knowing” or “instinctual knowledge”, motivated by the unconscious, is the dark, woody altar of Pan. The more it is repressed, the more it becomes uncontrollable. Another of the major shifts Pan consciousness instigates is a shift from a multidisciplinary to a transdisciplinary approach. The former refers to the coming together of people from various backgrounds and cultures to put their best foot forward while chipping in their expertise and knowledge for the betterment of the human race. At the same time, the latter believes in transcending borders, differences, and cultures, irrespective of a particular binary, and coming together to try various methods across all disciplines. The former believes in upending the dominant nature of discourses, which has mostly fallen short of its promises. At the same time, a transdisciplinary approach enables the empowerment of marginalised structures and discourses from antiquity onwards. Pan consciousness enables us to do this while encouraging imagination and creativity to go hand in hand with scientific knowledge and expertise. As Susan Rowland says, “It’s through panic, nightmare and horror that a repressed part of ourselves is remembered” (19). The post-pandemic scenario has provided the opposite platform for testing this reawakened and re-remembered consciousness for working towards re-establishing interconnectivity between man and nature, taking a step closer to pre-historic times.

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## **Intelligence in Literature: Beyond the Limits of Human Sagacity**

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### **Abstract**

Artificial Intelligence (AI) in literature (prose or poetry) makes us ponder the authenticity of human essence. While we, as writers, draft and redraft our works before finalising the last one, there are applications like Verse by Verse and many other platforms of Generative Literature that create poetry in a fraction of a second. “Indeed, it is capable of doing this, but can it do ‘that’?” renders us a sense of achievement. We call ourselves the master because we created it. The missing ‘that’ in machines makes us powerful. We realise that Alexa can only play the song we ask it to, which makes it a non-human entity, unless, of course, an AI would judge our mood and demonstrate ‘emotions’ through art one day. Voilà, game over!

This paper aims to highlight the essential aspects of AI in the literature that make it a potential to become a part of the traditional (human-written) literature. ‘Aesthetics’ and ‘Didactics’ – the significant objectives of literature being juxtaposed on AI written prose and poetry would undoubtedly clear the air in defining the limits of human sagacity, and whether or not the AI would fill the void of that ‘that’ as far as literature is concerned. Coders and programmers are artists who have managed to say a particular sentence in umpteen ways with various punctuated keys, and so have writers. Hence, the idea of machine-written prose or poetry soon being filled with ‘emotions’ that only we humans possess is catalysing enough to look out for the future outcomes in this new form of literature, Generative Literature.

**Keywords:** Artificial Intelligence (AI), literature, applications, aesthetics, didactics

## Introduction

Is it an aid or an adversity? Artificial Intelligence (AI) is getting better than humans at every step. This question makes us ponder what Freud stated in his essay entitled ‘The Future of Illusion’: “No, our science is no illusion. But an illusion it would be to suppose that what science cannot give us, we can get elsewhere.” With each passing day, we strive harder to ease our work, and AI is only assisting until one day, it will be competent enough to do our tasks better than we do. While we, as writers, draft and redraft our works before finalising the last one, there are applications like *Verse by Verse* and *Project Gutenberg* of Generative Literature that create poetry in a fraction of a second. Soon, the Marlowe in us would, startled and horrified, state:

*“Was this the programme that launched a thousand prompts,  
and burnt the essence of human written literature?  
Sweet AI, enlighten us with your mechanical kiss!”*

So, let us start by comprehending what literature is. Well, at its core, it’s a medium that writers luxuriate for transferring ideas and thoughts and transcends all limits of time and space. Literature is the essence of human emotions that drive us. The requirement of jotting down these emotions isn’t apparent, but it’s a function ingrained in the kernel of human DNA. We are social beings, and our survival depends on co-dependency and belongingness. Given that, literature is the common ground where all the mortal impulses collide to facilitate the immortal tradition of human culture.

There has always been a noticeable alteration in literature since the troubadours and the bards sang. With the invention of the printing press, everything people heard was accessible to them in writing. Gradually, there were umpteen genres and forms of works that the critics analysed and assessed for years together until the naissance of Generative Literature. At this point, it’s difficult to say whether this new form could produce works that could share the title of being a ‘literary’ work, but the potential possibilities weren’t numbered. Initially, when Artificial Intelligence responded to our emails, it appeared to be ‘artificial’; nonetheless, it commenced to act ‘intelligent’ too when it improvised after understanding our ways of answering or responding to questions. News articles fed with the ‘what’, ‘why’, ‘when’, and ‘how’ were accessible writings that AI did, but they did not merit being literature.

The open-source Artificial Intelligence (2019) created a language model, also known as Generative Pre-trained Transfer (GPT), a model which produces language by using a prediction function. It is programmed after the blueprint of the human brain using neural networks. These neural networks have algorithms that help recognise and comprehend vast amounts of data. There are certain sets of rules and instructions that form patterns in recognition. Just like our brain is a tabula rasa at birth, having no innate ideas, neural networks have no preconceived notion of language but are fed a gigantic corpus of data to grasp the general outlook of what one might expect it to produce. The algorithm is further trained to fabricate the most appropriate chain of thoughts, interlacing it with a tapestry of semantically legible sentences.

This program doesn't understand emotions about those ideas but makes judgments based on what word frequently occurs adjacent to the former word. Following this prototype, it makes decipherable yet somewhat incoherent pieces of language. GPT-3 has 175 billion parameters, making it 17 times larger than GPT-2 and around ten times larger than Microsoft's Turing NLG model. These parameters are the fulcrum of machine learning; think of a model as a hypothesis that uses the given parameters (examples of language, for instance, a web page, a video, or a song) as historical evidence and make predictions accordingly. Adding these parameters results in a more sophisticated system that produces outputs similar to what a human would have put forth. Coders and programmers are artists who have managed to say a particular sentence in umpteen ways with various punctuated keys, and so have writers. Hence, the idea of machine-written prose or poetry is catalysing enough to look out for the future outcomes in this new form of literature, Generative Literature.

### **Objectives and Research Gap**

Any work's 'aesthetical' and 'didactical' elements render it the status of 'literature'. Be it the fables of Jean de la Fontaine or the sonnets of Shakespeare, it all comes down to a work aesthetically evident and didactically present. These are not the essential conditions, but they are the most established ones, whether in the language or the literature. So, this paper aims to analyse specific works of AI-created poetry and juxtapose them to the criteria of literature to assess to what extent the content written by AI is worth calling literature and whether it or does not challenge human sagacity. The research gap demonstrates the lack of comprehension of AI-generated poetry and its purpose, the parameters of its being a work deemed 'literary', and if so, how. With this lacune missing from all the previous research on AI-generated poetry so far, this paper intends to answer some of the problems.

## Problematics

There are three questions or problems that we aim to answer:

1. Does AI-written poetry deliver on its promises? In simpler words, is the promise of writing sonnets like Shakespeare realised?
2. How close do the mechanical prompts generated by AI applications get to creating the human essence?
3. Does AI-written poetry challenge the boundaries of human sagacity? In other words, what could be an estimated future of Intelligence in Literature?

## Methodology

As far as the methodology of this paper is concerned, the application ‘*Verse by Verse*’ created by Google is to be tested to develop a quatrain after having selected the muses from the given poets to answer the above three questions. Along with this real-time trial run, we would also analyse some of the already created AI content learned scholars have criticised. Literature is everything human, and this research paper seeks to find the human essence in AI-generated poetry.

## Analysis and Findings

### 1. Does ‘AI-generated poetry’ deliver on its promises? In simpler words, is the promise of writing sonnets like Shakespeare realised?

A very renowned and contemporary poet, Kahlil Gibran, expresses his views about poetry and says<sup>1</sup>,

“*Poetry is a deal of joy, pain, and wonder, with a dash of the dictionary.*”

The latter half of his statement created a lot of commotion for people who believed that writing wasn’t mechanical but organic, yet it all made sense when the narrative of AI came into practice. What is it, anyway? A bigger dash of the dictionary, with a minor deal of joy, pain, and wonder, was also imitated. Platforms like *Project Gutenberg* or *Bot or Not* have fed thousands of works of the deceased authors to machines to make it generate short narratives.

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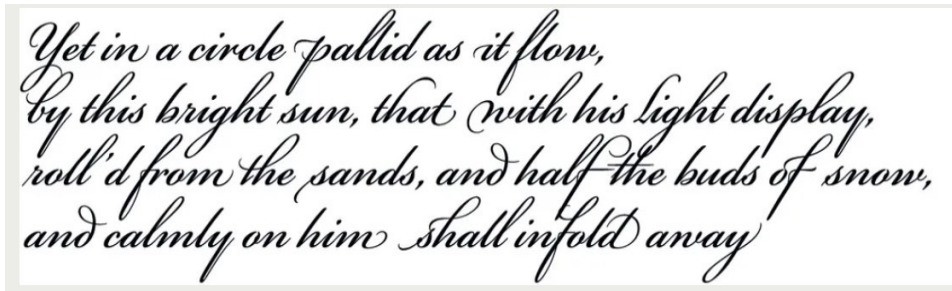
<sup>1</sup> <https://www.writerswrite.co.za/33-quotes-by-poets-on-poetry/> consulted on 07.01.2022

Even though it was an excellent imitation, it was an imitation nonetheless. For instance, one from Bot or Not reads,

*“There is no one else in the world/there is no one else in sight.  
they were the only ones who mattered/they were the only ones left.  
he had to be with me/she had to be with him.  
i had to do this/i wanted to kill him.  
I started to cry/I turned to him.”*

From a veteran slam artist’s mouth, this could still be received as emotional and overwhelming, but only if they manage to paint a landscape around it that justifies the presence of these verses in that entire tableau. Otherwise, it only appears to be an ambitious shot in the void aiming at nothing.

There are programs that promise to create sonnets like Shakespeare at the click of a mouse; for example, *Deep-Speare*<sup>2</sup>, a program trained to write sonnets, created the following result:



*Yet in a circle pallid as it flow,  
By this bright sun, that with his light display,  
roll'd from the sands, and half the buds of snow,  
and calmly on him shall infold away*

**Source: [www.spectrum.ieee.org](http://www.spectrum.ieee.org)**

This particular sonnet definitely has rhyme, rhythm and report, but it lacks reason. In simpler words, it was aptly a quatrain of a sonnet that has a significant style of rhythm called the iambic pentameter, where 10-syllable lines have a continual stress-space-stress sort of mechanism, giving out a cause that ends up in a couplet with the suggested solution. That’s how Shakespearean sonnets were. Similarly, the basic mechanical structure was present in this quatrain mentioned above, yet this ‘accidental’ creativity doesn’t suffice to be what it aimed to promise. Because the foreseeable couplet would have ended the intrigue these quatrains commenced, but so far, the AI was incapable of bringing up the ‘Reason’ of it, the context that can also be termed as the missing ‘human essence’.

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<sup>2</sup> [This AI Poet Mastered Rhythm, Rhyme, and Natural Language to Write Like Shakespeare - IEEE Spectrum](http://www.spectrum.ieee.org) consulted on 07.01.2022

In a different experiment, Dennis Tang tried out the GPT model to recreate poems of Plath, Frost, and Shakespeare in his essay "The Machines Are Coming, and They Write Bad Poetry." One of the results was hideous yet worth putting up. The following image is the extended version of Shakespeare's Sonnet 18, and the quatrains after the first are AI-generated.

Shall I compare thee to a summer's day?  
 Thou art more lovely and more temperate:  
 Rough winds do shake the darling buds of May,  
 And summer's lease hath all too short a date;  
 And the grass is green and the trees are full of fruit',  
 And, when the sky is blue and the heat is blazing,  
 And the rain is falling upon the fields and the trees,  
 But the sun is downcast as when it is rising,  
 And the sky is covered with clouds and the land is shrouded by fog,  
 And the sky is not bright to behold yet:  
 Thou hast not a thousand days to tell me thou art beautiful.

In his essay above, Tang states<sup>3</sup>,

*"At first glance, GPT-2's capacity for imitation is impressive: the diction, grammar, and syntax are all leaps beyond what most of us would expect from a computer. But if you squint harder, the cracks immediately show. Its rendition of the most famous of Shakespeare's sonnets immediately throws rhyme and meter out the window."*

In fact, the very link between the summer's day and the lover of the narrator as a metaphor goes missing, as the machine reiterates it for weather followed by a sudden transgression towards the cloudy skies. The author adds, *"And in lieu of Shakespeare's concluding immortalisation of beauty, we get an inversion so perfect it's perverse: Tell me you're beautiful, and make it quick!"*

The advances in programming can potentially bridge the gap between creativity and 'accidental creativity'. To commence with, the deep-learning systems, one of which is the GPT model, are dramatically flexible with their content. Even if they are fed with images, videos, voices, or texts, they have been coded to decode the patterns to provide desirable results. The three steps involved here are the selection of words similar to how Shakespeare wrote, the assurance that the chosen words, when put in a line, have a 10-syllable rhythm, and finally, the presence of a

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<sup>3</sup> <https://lithub.com/the-machines-are-coming-and-they-write-really-bad-poetry/> consulted on 25.12.2021

rhyming scheme. With that said, I'm sure Wordsworth would have been very disappointed because for him, 'Poetry was always *'the spontaneous overflow of powerful feelings: it takes its origin from emotion recollected in tranquillity'*<sup>4</sup>, which this machine fails to render.

Hence, the answer to the question asked would be No. No, AI-generated poetry does not render what it promises. Perhaps this is because the promises made by Open AI are way too ambitious and are realised partially. Indeed, the process matches the steps in an experiment, but having had the results juxtaposed with the works of the great poets of all times, we concluded that it lacked the 'human essence', the only element that makes a work 'literary'.

## **2. How close do the mechanical prompts generated by AI applications get to creating the human essence?**

As discussed earlier, the functioning of any application for writing poetry follows specific steps. It doesn't just produce a poem independently; it helps the user procure the sense of 'being a poet' by providing prompts. With each prompt selected, the verse gets created. It is undeniably essential to notice the power this application's user holds. He does not have a say in the process while picking one of the prompts from the options.

Albert Camus, the French absurdist, in his timeless work "*Le myth de Sisyphe*" said<sup>5</sup>,

*"The absurd does not liberate; it binds. It does not authorise all actions. 'Everything is permitted' does not mean that nothing is forbidden."*

What Camus had predicted in the mid-20th century was that the creators and users of these applications could not notice. When a user picks a prompt from the given 4-5 options, he analyses the potential of it concluding in a plausible verse, however what he doesn't comprehend is the cadre created in those prompts that limits his otherwise *gargantuesque* imagination. With every phrase picked and added to the former phrases, he starts believing that he wrote it, given his time spent being a considerate consumer, and that accomplishment renders him a sense of power, albeit flawed. His acceptance of himself as a poet and a false sense of gratification bind him instead of fetching him liberation.

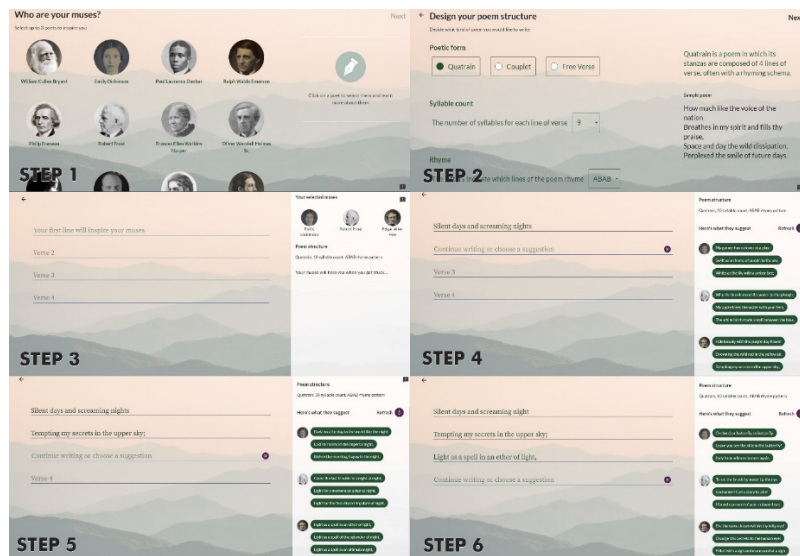
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<sup>4</sup> <https://interestingliterature.com/2021/02/wordsworth-spontaneous-overflow-of-powerful-feelings-meaning-analysis/> consulted on 27.12.2021

<sup>5</sup> <https://www.goodreads.com/work/quotes/855563-le-mythe-de-sisyphe> consulted on 07.01.2022



To comprehend all this mechanism, we created a quatrain in *Verse by Verse*<sup>6</sup> and documented the entire process in the form of images. Starting with the choice of three poets to be considered as our muses out of the 22 poets, the application allows the user to create a quatrain, a couplet or a free verse. After deciding on Emily Dickinson, Robert Frost, and Edgar Allen Poe, we made a quatrain with an ABAB rhyming scheme and ten 10-syllable counts for rhythm. The first line is to be entered by the user, which from our end was “*Silent days and Screaming nights*”, although what followed as prompts was nothing but sheer mockery. The prompts suggested by AI lacked everything intelligent. It is indeed user-friendly and allows writing your verses, so what is the objective of putting up those prompts? The following images are arranged in steps, and the final poem is attached at the end.



**Image 1: The steps involved in creating a quatrain on Verse by Verse**

**DAY AND NIGHT**

Silent days and screaming night  
 Tempting my secrets in the upper sky;  
 Light as a spell in an ether of light,  
 Filled with a sigh and murmured at a sigh.

Written by the user

Inspired by Emily Dickinson, Robert Frost, and Edgar Allan Poe

COMPOSED IN VERSE BY VERSE

**Image 2: The final quatrain created by us in Verse by Verse**

<sup>6</sup> <https://sites.research.google/versebyverse/> consulted on 12.12.2021

The prompts are created with enough data fed to program the writing styles of those poets chosen as muses because every suggested prompt follows the rhyme, the rhythm and the report. However, the 'reason' is missing. The backdrop of those loosely hung phrases with nothing in common and nothing to relate to appears to be nothing but a mockery of everything literature ever meant. Hence, the answer to the question we asked about the mechanical prompts generated by AI is: No, it is not at all close to creating the human essence, let alone writing like those legends. This does not yet mean that these programs do not have the potential to bridge that gap, which makes us ask the third question.

**3. Does AI-written poetry challenge the boundaries of human sagacity? In other words, what could be an estimated future of Intelligence in Literature?**

Regarding the reception of AI-generated content, it is indeed a mind-boggling aid that challenges human sagacity and cognisance. During a webinar on Digital Humanities conducted by Dr Dilip Barad from Bhavnagar University, a survey was conducted wherein 5-6 poems, both AI-generated and human-written verses, were sent to the participants to find out which ones were written by humans. The results were undoubtedly shocking as more than 75 per cent of responses recorded were about the misjudgment of AI-written poetry compared to the ones written by humans. Currently, the machine only renders 'imitated' or 'accidental' creativity, which is challenging enough because, despite the missing human essence, it is a potential aid or adversity. Later, those verses were analysed to the extent of juxtaposing them to content termed as literary, and that is what brought us to the conclusion that the lack of 'reason' or 'context' or the 'human emotions' renders them futile.

Hence, the estimated future of Intelligence in Literature could be an even developed language model that not only formulates prompts but also binds them together in an emotional liaison. It would be a massive aid to writers struggling with linguistic resources, while all they would do is pick up the most appropriate choice from the varied vocabulary and verses. It is easier said than done because it would underestimate human emotions. Assuming that an algorithm would contain every inch of emotion we ever feel is a far-fetched promise. Languages together become inadequate sometimes to put to words the touch of a baby's hand or the warmth of the beloved's kiss, and getting something so unique, only to humans, from a machine puts to quest the human sagacity.

## Conclusion

To conclude, it is noticeably remarked that AI-generated content cannot be deemed 'literary'. Since the Generative Pretrained Transfer model is based on a specific algorithm, the poetry formulated by it isn't strictly organic, and resultant verses are more of an equation of words that frequently occur together rather than an organic whole. Functionality precedes aesthetics, dismissing it as a viable producer of sound poetry. One of the critical features of poetry is its aesthetical and didactical value that can only be sourced from the capability of humans to feel emotions. Because the amalgamation of sentiments and syntax is the recipe for a good poem, and the former is missing from the GPT model, it renders the whole operation barren.

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## Critical Appraisal of the Short Stories of Ernest Hemingway

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### Abstract

This paper examines Hemingway's short stories and concludes that they are environmentally sensitive. The research reveals a contradictory trait of Hemingway's natural love and aggression. As a result, his approach to life is paradoxical. The characters are in a bad mood and turn to nature for comfort. The protagonist's emotions and sentiments are represented in the explanation of existence. The findings show that Hemingway's short stories are rich in environmental themes. His novels and novels, which were published after the short stories, frequently address the same ecological issues as the short tales. This article concludes that Hemingway's short stories exhibit environmental holism.

**Keywords:** Hemingway Short Stories, English Literature

### Introduction

The old French language uses the Latin word "nature" to mean state of birth, quality, nature, natural order, universe, and the phrase "natural". Purusha influenced the physical and mental world through the Sanskrit language word Prakriti. The genuine characters of persons were portrayed and produced in connection with fact in eighteenth-century creative fiction. Since pre-Christian or Vedic times, nature has been called the Great Mother. In Christianity, the idea is that design is created for children. In the Vedas, there is a balance between humans and nature. Over the 1980s, interest in nature writing and literature focused on "green" issues arose, and in the early 1990s Ecocritical period became a recognised topic in American university literary departments.

Hemingway was one of the twentieth century's greatest writers and a legendary figure in American literature. Over the last few decades, his short stories and novels have elicited significant critical attention. Hemingway began his career as a writer apprentice in Paris and

then as a war reporter for the Spanish Civil War. His stories are based on his personal experiences. He first left his family when he volunteered in Italy in 1918. During the First World War, he was assigned as an ambulance driver and was severely injured. In an interview, Hemingway stated that he was shot in the right leg and that the surgeons removed over 227 pieces of metal. Not simply nightmares, but his acute exposure to this wound contributed to a wish to recreate the awful incident. Hemingway's atmosphere inhibited his psychological and artistic expression and physically and intellectually distracted him from battling. This was to bring him first to the remote woods of Northern Michigan, where he spent his most happy years as a child, and then to Europe, where his literary abilities began to take shape. After the battle, he returned to America and published short stories. His stories create room for ecological inquiry by focusing on the physical environment and the protagonist's relationship with nature.

Hemingway's commitment to his art set him apart from his peers. He aggressively sprayed language and invented the *à lisiâ* theory of prose. An iceberg only shows a portion of the entire ice mass. Nonetheless, a writer explains or introduces a portion of what the reader might be able to learn. In exchange, the reader can reconstruct the rest of the story, fill in the gaps, and respond to the scene or situation. It is necessary, according to Hemingway. In particular, in his works, he used understatement and conveyed a variety of degrees of significance, primarily through sarcastic and symbolic meanings.

Hemingway's short stories are among the best works of modern literature. They have a considerably more extensive selection than the issues and themes they cover. With the exception of Henry James and William Faulkner, no American writer from the same era has dealt well with extremely difficult issues in recent decades. Hemingway relished the opportunity to write about media and politics. During his years as a reporter, he acquired a healthy hatred for politics.

Hemingway's stories are microcosms of his technique, demonstrating how he can produce much work in a small space. One of Hemingway's initial distinguishing characteristics is his strong emphasis on the dramatic form. Unlike the previous novels, Hemingway avoids overt subject exposition, didactic explanations, character studies, and authorship notes. As a result, Hemingway's stories show rather than tell. Hemingway's stories show that he is still active in the sacred realms of shooting, fishing, trekking, dining, riding, bullfighting, and battle. In his works, he reveals the harmful aspects of the industrial world but not its origins. The key themes

are passion, broken relationships, a sense of solitude, war shocks, criminality, violence in everyday life, and daily violence. Death and scarcity are prevalent themes in almost all stories.

Hemingway's style of writing avoids sentimental distortion. He tries to excite and control impulses at the same time. As a result, the emphasis is on selecting the appropriate exterior information, facts, images, occurrences, and behaviours to automatically elicit the reader's interior emotion. Eliot defined the Objective Correlative as a "collection of objects, a condition, and a sequence of events that are to be the shape of this particular feeling: the emotion is automatically elicited when external occurrences are presented, and which are to finish in the context of experience" (Abrams 1978: 115). Hemingway's purpose is to elicit strong emotions, which is difficult. It necessitates the author's undivided attention and proper experience absorption and integration. In prose literature, Hemingway has established himself as a model.

Hemingway's public presence was primarily built through his nonfiction in the 1930s, including *Death in the Afternoon*, *Green Hills of Africa*, and *Esquire's* series of pieces on sports, politics, and art during the Spanish Civil War. Hemingway's first book, 'The Sun Rises', was published in 1926. The Spanish festival provided the novel's setting. With his partner Hadley, Hemingway travelled to Pamplona for the fiesta. Following the festival, Hemingway composed the first copy of the fiesta in Spain. The story revolves around an American party in Europe during the 1920s. American expats in Paris have led a wretched existence since the war. They were completely impotent and perplexed after the conflict since the concepts that had adequately represented them prior to the war had become outmoded. They've become lost souls who live tranquil lives of suffering.

In 1929, a book called 'Farewell to Weapons' was released for the generation that lived through World War I. The story revolves around Catherine's love for an injured ambulance driver. One overarching notion is the futility of combat and the failure to look for significance in a time of war. Despite the fact that the book is widely regarded as a Great War novel, it spends more than half of its time in clinics, where many nurses and doctors battle a variety of ailments. The story is replete with nature photographs, many of which are recurring motifs. Soldiers' cynicism and population movement are depicted in this book.

'Destruction', Hemingway's book on the art of bullfighting, was published in the afternoon of 1932. Hemingway incorporates Spanish beliefs throughout his writings. The profound examination of a place, a people, and a display that pushed Hemingway is projected here. The

thesis is a collection of novels on the ceremonies and customs of Spanish bullfighters. It chronicles Hemingway's ten-year love affair with bullfights.

'Green Hills of Africa', a novel about blood sports, was published in 1935. The book's key themes are creation and hunting. The novel is based on Hemingway's voyage to East Africa with his wife, Pauline. This book tells the story of his four-part hunting trip. The book focuses solely on the search for massive games.

Hemingway was open to seeing the ailments of the twenty-first century. His use of metaphors adds to the richness of his persona. Because Hemingway participated in the war and suffered leg fractures, he exhibited the same trauma as Nick Adams. In the same way, the second portion demonstrates the incompatibility of men's and women's bonds. In his writings, Hemingway's attitude toward women is unusually masculine. He does not enter the inner universe until he has established a connection with the people with whom he is associated. They become objects of love or rejection for the reader.

One of the reasons why ladies shared this viewpoint was Hemingway's treatment of his mother. He accused his mother of being a manipulator and blamed her in part for his father's suicide. His mother, on the other hand, had no connection to Hemingway. Even if it is only for a short period, the two works have no pleasant friendship. Many of his films feature autobiographical elements. Some of his novels are around the River and in the Forest, The Torrents of Spring, and Under Kilimanjaro. A Farewell to Arms for Whom the Bell Tolls, the Garden of Eden, the River Islands, and the Trees.

### **Nature as a Symbol in Hemingway's Stories:**

The employment of symbols in such stories is crucial because many of them are inspired by nature. His characters frequently live in valleys or seek refuge at the foot of his symbolic mountains. Physical and psychological wounds are some of the most common symbols in early works. Seasonal changes, particularly fog, frost, fall, and winter, correspond to human fates, whereas the sun and dark indicate existence, death, or good and bad qualities. The seasonal changes are the same every year. Ascending a mountain represents spiritual cleansing, passing through a body of water represents spiritual transformation, sunset represents death, sunrise represents regeneration, and so on. Many icons are depicted as images of creation, faith, or existence.

Symbolism appears in Hemingway's work as a representation of an unseen aspect, such as the little tip of an iceberg on the water's surface, indicating that the iceberg is seven times larger. Human nature's less physical and distinct face is nonetheless a concrete and distinct representation. Ecological observations in Hemingway's short stories are on the iceberg's tip and are part of it.

One of Hemingway's most essential symbolic devices is the journey of deception, which he uses to portray his themes. A journey, in spiritual terms, is an expression of the pressing need to learn and grow, which underpins the present moment and journey experience. This metaphorical voyage is a journey from the profane world's darkness to the light of the sun. In a certain sense, all of Hemingway's writings deal with this theme in some fashion. All artworks, it should be understood, have at least two enormous regions of meaning and movement. The external or outward movement is a literal plot creation, whereas the internal or inward movement is mostly communicated through imagery and emblems. The work of the travel artifice is an excellent example of these two movements. Eco-critics argue that life is a significant concept in human beings' essence. The protagonist's journey and everything here is to an end that we will Eco critically analyse in depth.

Malcolm Cowley initially presented Hemingway's approach to visuals depicting an environment beyond. Hemingway best uses reality and metaphors to communicate his meanings. His protagonists' inner emotions are immortalised through symbolic meditation.

The spiritual path of the hero might be described as one of unity with nature, which encompasses all aspects of creation and life. As a result of this holy journey, Hemingway is exploring the essence of existence or death, the reality of the cosmos. Though there is much autobiographical information in everything Hemingway writes, each work corresponds to a specific stage of his spiritual quest.

Though Hemingway used a variety of topics and problems in his short stories, the breadth of symbolic implications is broader. "When the reader becomes familiar with Hemingway's work in parts beneath the surface, he can most likely find all-round symbols and in the magnificent, lightweight, and buoyant sequence of crystallisation that contain enormous amounts of weight," writes Carlos Baker (1969: 117). The psychological states and personal appetites of the Stories' main characters reflect Hemingway's basic emblems, the animals. Hemingway's use of metaphors boosts his characters' resources. The reader is shown a vehicle that the



character may be identified with. Without them, the stories will be devoid of much colour and significance.

The subject of most novels is created using natural settings. His work is based on the link between nature and human culture. Nick Adams, the fictional narrator of a series of 14 novels, is the polar opposite of the average 20th-century citizen, who prefers to disconnect from civilisation and commune with nature. Nick Adams wants to explain to his readers the value of reconnecting to the true core of humanity through communion with nature, as Hemingway did.

Hemingway's short stories deserve eco-critical scrutiny for their reflections on ecological topics. With the rise of eco-criticism, Hemingway's writings grew more environmentally sensitive. His literary grasp of the natural world has been exhibited in several articles. In 'The Introduction to Hemingway and the Natural Environment', Fleming (2000) declares that he is one of the authors closest to nature. He claims that Hemingway's nature complex resulted from his bodily sensibility and reading nature's writing.

Hemingway reveals his ecological experience in his books. According to ecological research, humans are not alone or outnumbered by nature. Individuals, on the other hand, are merely components of a complicated life network. Hemingway's writing reflects a reverence for nature and sensitivity to the land, not only for the living animals that are the hunter's hostages.

The portrayal of Hemingway's reliance on and fair collaboration with nature reflects a contemporary perspective on man's place in the biosphere. The connection between sport and life has always been important to Ernest Hemingway as a writer and person. Shooting, fishing, wrestling, and bullfighting are all recommended blood sports. If one wishes to make a fortune from a lifetime of photographs and lyrics, Hemingway's life record is beautiful.

He claimed to have harpooned and killed shoals of Marlin, tuna, dolphins, kingfish, sea turtles, and a sixty-foot whale (along with lions, leopards, and buffalos). Sharks may also have been targeted with weapons for sport, as well as non-game creatures such as flying opponents, cranes, swine, and snakes. As Glen A. Love has pointed out, Hemingway's reverence for nature contrasts sharply with his primordial drive for hunting, fishing, and bullfighting.

The youthful Ernest Hemingway had a somewhat different encounter with nature, as he admired Cather's iceberg theory in his minimalist style studies. At the story's heart is a strange, tragic mind, a contradictory and disastrous ecologically friendly conflict between the author's

pro-accurate primitivism and his love for animals and the natural world (Practical Ecocriticism 2003:11).

On the one hand, it states that Hemingway enjoyed hunting and killing large amounts of animals and fish; on the other, it claims that it entails a contra tendency of the same topic. As a result, Hemingway asks for a high natural world price. Hemingway's question of primitivism arises as a counterpoint to the war on the planet and the degradation of the natural world. His particular brand of primitivism is characterised by a denial of creation's interconnection and a harmonious sense of oneness with the universe. Hemingway, on the other hand, clearly saw himself as a protector or spokesperson of the natural world; he was well aware of how places like Michigan's old-growth forests were being degraded.

Will an earth-shaped calamity always be remembered as the hero? This is a significant theme for Hemingway, and it will continue to be for his readers in the future. In many ways, Hemingway's work reflects this brutal statement of human will on the world. The heroic selfhood of Hemingway's ethics exists outside of a larger framework in which the speaker may admit primitivism. Hemingway resorted to Nature to escape the same individualism that has caused ecological ruin and corroded the biological basis of contemporary culture. Naturality, of course, is the organism that might lead to violent and devastating personalism in Hemingway's art and existence. This research effort aims to examine Hemingway's short stories from an ecological standpoint. In today's world, men without people win nothing, and the stories are divided into three volumes. 'In Our Period' is a collection of stories based on pre-war and post-war viewpoints. 'Men without Woman' is a nod to his divorced mother and tumultuous marriage. These stories usually revolve around a person's loneliness due to marital problems. 'Nothing' about the postwar impact on residents is a collection of Winner Takes Nothing stories. On the other hand, hunting, battles, ladies, floods, and nature are central to the stories. His love of nature necessitates an ecocritical examination of his stories. On the other hand, all of Hemingway's short stories offer ecological insights. It is not to be seen. Some of the stories are not ecocritical and have all been left out of this report.

### **Nature-Culture Interaction**

Ecocritics dismiss the idea that something is generated socially or linguistically. For ecocritics, nature exists outside of ourselves. This has been the subject of solid debates with Alan Lipo, a US Wordsworth critic, and several ecocritics, including Jonather Bate and Terry Gifford, who have recorded some of the most heated exchanges. The subject of how truth is created socially

and linguistically is a source of debate. It is a fact that people's reactions to nature differ, and some of these differences are cultural.

Ecological critique shares the core notion that civilisation is tied to and influenced by the physical environment despite the wide range of disciplines and degrees of performance. Ecocriticism focuses on the relationship between nature and society. Knowing how nature and society actively impact and build one another is part of an educated ecocriticism. It has one foot in literature, where it plays an important role, and the other in the field. As a theoretical discourse, it negotiates between the human and the non-human (The Ecocriticism Reader 1996: xix).

An eco-criticism that sees humans as part of nature would focus more on texts showing people who observe or live in the natural or rural world. Human cultures would be depicted in their many interactions with nature.

In his essay on Ecocriticism in *Beginning Theory* (2002), Peter Barry defined the "alien outside world" as a group of adjacent and overlapping places that are increasingly transitioning from nature to culture:

- the wild (for example, deserts, oceans, and deserted continents) • the lovely countryside (forests, lakes, mountains and cliffs).
- rural agricultural areas (for example, mountains, plains, and woods)
- A beautiful domestic setting (e.g. parks, gardens, streets)

When we pass through those places, it is clear that we are progressing from the first to a more 'clean' existence in the last. The two main sectors are mostly cultural and natural. Nature writing focuses on two mid-range fields.

### **Nature's Literature**

The early romantic relationship between human and non-human existence also played a role in American natural history research. It was vital to identify, analyse, and characterise the wilderness as a way to assess and express American prospects and establish national faith in the vast, untouched wilderness of the new continent.

William Bartram, Alexander Wilson, and John James Audubon exemplify the work of natural history authors in the early Romantic era. The Romantic natural historians aided in the movement of divinity into the wild, establishing the deistic presumption that the creator is

visible in the world. They affirm America's spiritual superiority over domesticated Europe by emphasising God's sublime presence in the Modern World environment. These writers presented an alternative to the standard and dominant expanding ethos of the day by highlighting a sense of belonging in a natural community and the morally regenerative virtues of nature, thus contributing to establishing a minority heritage of environmental care in the Americas.

A wandering naturalist, William Bartram studied the American environment and wrote the epic *Time Travels* (1791). His works are invaluable to someone completely immersed in the American wilderness. Bartram's understanding of the beauty of natural processes and his belief that everything manifests — the divine and matchless workmanship — resulted in a proto-ecologically defined sensibility. During the excursions, Bartram demonstrates and accepts the network of links he sees in the woods.

Alexander Wilson began his research career by walking thousands of miles in search of unfolded species, inspired by the beauty and diversity of American birds. Wilson was the nation's preeminent bird expert when his friend Bartram died only eleven years later; nearly all of his nine monumental volumes of *American Ornithology* (1808-29) had been completed.

Wilson intended for his evolutionary background to be a reference not only to science but also to a nation's national identity. Wilson's love narrative poem *The Foresters, Son* is about a twelve-hundred-mile journey to Niagara Falls' collapse.

All drove an irresistible impulse to portray the magnificence of the American wilderness, which was on the verge of extinction. The three praised their encounters with nonhumans and pioneered the concept of protoecological empathy in American letters, which would rely on future advancements in the natural history writing genre. The most well-known literary contributors include Henry Thoreau, John Muir, Mary Austin, Annie Dillard, and Barry Lopez.

### **Conclusion**

This study aims to analyse short stories and examine how they might illuminate ecocritical topics like deep ecology and ecofeminism. Four stories are discussed, not just under one heading but under several different headings. The various issues are covered one by one in each chapter. The current study considered the multiple aspects of ecocriticism that emerged from a close reading of Hemingway's short stories. *The Old Man and the Sea* by Ernest Hemingway is not included in this study but provides an ecological perspective. This research can be

expanded to include long fiction. Another research subject could be a comparison of Hemingway's history and Indian literature.

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## Migrant Labourers in post-covid Kerala: A Phenomenological Perspective

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### Abstract

Migration in the context of a state like Kerala brings many unique aspects of socio-economic transformation. The popular emigration trends from Kerala to Gulf countries and other Indian states highlighted the 'push factors' that the society experienced for too long. Today, Kerala is also one of the states accommodating migrants, mainly from north-eastern India. There is a massive workforce in Kerala from states like Assam, Odisha, West Bengal, etc., owing to better wages, security offered by the government, cultural factors and occupational mobility. The effect of the COVID-19 pandemic brought to light the vulnerability of migrants throughout the world. India saw some worst situations where the lockdown forced migrant exodus to the native states from northern regions of India. While the migrants embarked on a tedious journey on foot due to lack of transportation, many new issues surrounding the socio-cultural adjustments of migrants have emerged. According to an article by K.A. Martin published in 'The Hindu', Kerala offers Rs 767 to a daily wage worker, which is way above what states like Gujrat, Uttar Pradesh and Odisha offer. There is no denying the fact that the pandemic shook the employment situation where both the informal and formal sectors suffered. The economic situation drove the migrant labourers back to their workplaces. Kerala had been doing great in terms of providing migrants with essential economic and social security before the pandemic. Still, we must understand the current challenges surrounding a migrant in Kerala.

This paper explores the changing social, economic, and cultural dimensions of migration trends in post-COVID Kerala, focusing on the lives of migrants from northeastern India, for whom a brick industry in Thodapuzha Kerala has been chosen. The study is based on a phenomenological approach. Oral case studies and narrative analysis have been used to develop an understanding of the issue.

**Keywords:** Migration, Narrative analysis, exodus, pandemic, phenomenological approach

## Introduction

Sociologically, migration can be defined as a process in which individuals move from one socio-cultural setting to another; this could be a desire for a better standard of living, marriage, natural or human-created disasters, political crises, etc. According to the survey conducted by the State Planning Board Kerala, the total migration would be between 45 to 50 lakhs in 2025 and between 50 to 60 lakhs in 2030. The estimated number of workers from 2017 to 2018 stood at 31.4 (Parida, Raman & Das.) Migrant workers remit 750 crore rupees annually to their native states (Deccan Herald). Migration leads to positive changes as we witness more cultural integration, growth for the host region and the migrant community, and the exchange of various forms of knowledge. Still, it also gives rise to competing interests and insecurities. The world came to a standstill when COVID-19 entered a pandemic, testing humanity in every possible way. It changed the way migration is seen as a process. There needs to be an understanding that is based on the experiences of the migrants, as they were not only in isolation but also distant from their families. A phenomenological framework is based on subjective descriptions, everyday life experiences, and meaningful accounts of objects and structures. This would help us understand the migrant experience at a deep sociological level. As Kerala has proven itself to be a favoured state for migrants even in times of pandemic, it can offer relevant insights into the issue of migration.

## Review of literature

Upreti (1981) observes that we need to examine both from the perspective of migrants and the host what sort of circumstances are favourable and unfavourable as far as migrants are concerned. His analysis of hill migrants from the Kumaon region in Jaipur highlighted that there is re-socialisation for migrants when they shift to new places. Still, at the same time, we find that people tend to keep their traditions alive and accept the culture of the new place they are part of.

Kaul (2005) observes that migration can be biological, voluntary, forced, planned, or unplanned. The case of migrants from the northeast of Kerala shows migration being voluntary and forced-planned.

Duvell & Jordan (2015) conclude that migration tends to intensify inequalities that are not only economic but social as well. The identity of a migrant can change in the sense that they

can represent an entire community that gets stereotyped in a certain way. It is observed that certain ethnicities and nationalities, from the perspective of the host country/region, display suitability for specific occupations. Everyone has the freedom to choose where one wants to live or work, but at the same time, vulnerabilities must be addressed, and rights must be protected.

Brahma & Paul (2018) identify financial crisis, debt, lower wages, and unemployment in the place of origin as making the phenomenon of migration unstoppable. However, migration puts pressure on the population. The study observes that the state government is now taking measures to better accommodate migrants, as their health and other living conditions cannot be termed satisfactory.

Lusome and Bhagat (2020) observed that Assam and Manipur have the maximum outmigration, while the other northeastern states receive migrants. The study finds that work is one of the primary reasons for migration. There is an increase in internal mobility within the northeastern states, and hence, the ethnic communities are finding a need to handle migration better. Of 512 thousand migrants from north-eastern states who returned to their hometown, 390 belonged only to Assam.

Rajan (2020) states that since Kerala started receiving cases faster than the other states in India during the breakout of COVID-19, there was better preparedness on the part of the state. As Kerala is also a state with huge out-migration, sudden pressure during COVID-19 was expected. Kerala had, hence, dual problems to deal with. The arrival of population from Gulf and European nations, as well as the migrants inhabiting Kerala, were taken care of by the government's effective strategies.

Parida, Raman & Das (2021), in the study titled "In-migration, Informal Employment and Urbanisation" in Kerala, have concluded that since 2011, migration from states like West Bengal, Assam, Odisha and Bihar has been at an all-time high with a growth rate of 20 per cent. More seasonal migration from these states is experienced in Kerala. Migrants have become preferable because they regularly work, and employers can pay them less than local labourers. The study also found that the state government provides health insurance schemes to migrants, but only 13% of them are availing of them. The companies are not providing any extra benefits. Because of inter-state migration, structural transformation has speeded up. An increased level of aggregate demand has speeded up the urbanisation process in Kerala.



Raghunath(2021) highlighted that migrant workers in Kerala are remitting 750 crore rupees annually to their native states, even though the wages are discriminatory. Social security schemes for migrants are absent since they are playing a huge role in Kerala's industrial development. The system needs to evolve to address the concerns of migrants.

Martin(2021) has analysed a study conducted by the Kochi-based Centre for Socio-Economic and Environmental Studies according to the growth of eastern migrants in Kerala is due to higher wages, fast-paced urbanisation in Kerala, opportunities for occupational mobility and a safe environment for female migrant workers. Even though there are vast differences in the socio-cultural patterns, the gap is reducing due to migration.

Rajan (2021) observes that the lockdown imposed because of COVID-19 brought to light the unpreparedness of the government in the case of migrant workers across India. There has to be a better system because if internal mobility within India is common, then we must ensure that we take care of the basic needs of migrants. The Central government has introduced the 'One Nation One Ration Card'. This will ensure that food security can be availed in whichever state the migrant works in. There has been less attention to compensate for the loss that migrants experienced because of lack of work owing to the pandemic. There is a strong need for governmental intervention.

### **Research Gaps**

The studies highlight the economic impact of migration. The situation of COVID-19 put financial pressure on the migrants. Still, there is a need to understand the insecurities that can arise in the minds of migrants, as during times of crisis, there is a sudden feeling of homesickness. We need to understand the situation through the lived experience of the migrants. Moreover, the studies need to focus on the social and cultural indicators of adjustments among the migrants in Kerala.

### **Research Methodology**

The research paper is based on primary and secondary tools. The study is entirely qualitative in nature. The case study method has been used to collect primary data, and the collected data has been subjected to narrative analysis. The data has been analysed through the inductive method of narrative analysis. The migrant labourers of A.S. Industries, Idduki, Kerala, have been included in the study. A.S. Industries deals in brick construction.

### **Reliability and Validity**

Prolonged engagement (sufficient time has been devoted to understanding the cultural setting and understanding the subjects) and Triangulation (multiple sources have been used to cross-check for inconsistencies) have been used to establish validity and reliability.

### **Findings**

Based on 15 case studies conducted using narrative analysis as a tool, the following themes have been developed to bring out a phenomenological perspective.

### **Profile of the Respondents**

In the AS industries, Muthalakodam and Idukki, there are 20 migrant workers, of which 15 have been selected for the study. The subjects fall between the age group of 20 and 30. They all belong to Assam as Industries has other units where only one migrant belongs to Odisha. As far as the educational profile is concerned, only one respondent went to college but dropped out in the first year. All the subjects went either up to the primary level or secondary level. So, it can be concluded that only the respondents have completed Higher secondary education. Only eight respondents are married rest, and seven are bachelors, according to the information given by the supervisor. The information was verified at the time of the field study.

### **Themes**

#### **Perception towards 'work' and 'working in Kerala'**

The cases that were studied understood work to be a means of meeting materialistic needs. The migrant workers engage in agricultural work when they visit their native place, and when the agricultural season is over, migrants return to Kerala. The social expectations are clear in this sense. As a seasonal occupation, agriculture pushes people in India to look for alternatives. For north-eastern people, migration is the alternative. The subjects don't have too many productive skills. Education definitely does not result in an economic opportunity, as even those who have cleared secondary or higher secondary did not go for any vocational training. Another work the subjects could vouch for was driving. Of all the cases examined, only three knew how to drive. Most of these workers have come to Kerala through acquaintances who are labourers there. When asked if they like working in Kerala and how comfortable it is, the workers say, "*Sab accha hai*" (everything is good). The new migrant

workers don't find the wages satisfactory enough, but they still want to work here. Some workers have been staying for more than ten years now. So, the perception created for work is only in terms of how consistent the flow of income will be. According to the inputs given by the supervisor, the newcomers are given 650 rupees per month, and once they learn the work, as per the experience, the wages are revised. The wages stand between 650-1000 rupees per month. As such, no pressing demands for pay hikes have been witnessed. The industry maintains its criteria, and they don't differentiate between local and migrant labourers. Unfamiliarity with the social setting becomes secondary as one finds acquaintances or at least can relate to fellow workers. Kerala is a destination that will provide them with social security until the time they want.

## **2. Familiarity with Kerala's socio-cultural setting: Examining Re-socialisation of migrants**

The migrant labourers agreed that they didn't understand Malayalam much. Even those who have stayed for 5-6 years say that their language is Assamese, so learning any other language is a little tricky. The language linking the labourers and their 'Malayali' counterparts is Hindi. It is known that Hindi is not widely spoken in southern states, and there is no fluency in the language. Still, here, Hindi is more based on situation and perception, reinforcing that language construction is not rigid. The migrants are comfortable with their mother tongue, and Hindi is comparatively more understandable than Malayalam. The difficulty level is their construction; they have no urge to be perfect in any other language. In that sense, they are assertive about their 'Assamese Identity'. The employers, too, don't show much interest in perfecting any other language. Even though there is a vast linguistic gap, it does not act as a barrier between the employer and the workers. As far as other cultural factors are concerned, the migrants aren't involved much in understanding the food or festivals of Kerala. They prefer their usual diet, but they are quite welcoming when celebrating their festivals. Bihu is celebrated with great vigour, and Keralities have been able to understand the significance of the festival from the perspective of the migrants. They have no plans to get their families here, and their cultural identity is powerful. Migrants reported they don't get their wives or children with them because their families are rigid. There are a lot of apprehensions about Kerala among the people there, and also, the structure is patriarchal in nature, which expects the wives of the migrants to take care of the families. The social need for familial presence is ignored by the migrants not only because of the financial constraints but also because they don't want to disregard their familial decisions. Social relations in the workplace are essential

for emotional stability, and hence, migrant workers keep themselves entertained with music, movies, etc.

### **Covid 19 pandemic: The Emerging Migrant Ideology about the host state (Kerala)**

When the COVID-19 pandemic hit, it posed the most definite questions for the migrants. Their families depend, by and large, on the remittances of the work in the construction company. The imposition of the lockdown created fears among all the migrants, which was usual. But there wasn't any situation that could not be managed. They recalled that the lockdown kept them from work, but the company ensured they were fed. Arrangements were made for food, and the severity of the disease was explained. The migrants were living on a sharing basis in the accommodation provided by the company itself. Migrants reported that their employers supported them in maintaining essential hygiene, which was the only way to be safe. The practices were essentially good because nobody got infected in the first wave. At the moment of crisis, the state government announced that it would produce 5 kg of rice per person. Even though the migrants were not covered under any food security scheme in Kerala during the crisis, the state government was protective in providing the essentials.

From the perspective of migrants, the financial crunch was the expected consequence of the pandemic. But they did not lose on the accommodation or anything else. They said they were aware of the situation and hence stayed back. The employer was cooperative, and the work started as usual once the lockdown was lifted. Two migrant workers took flights to visit their families. They could save money from their wages. This is not a usual phenomenon when we talk of unskilled workers. This is an indication of what financial empowerment can do. A capitalistic system widens the class divide, but this can be reduced if employers have better policies for their workers. The workers who went to their native places returned because Kerala offers them financial security, and the environment is less hostile. There are not many conflicts or clashes reported. According to the supervisor, the contact hours between local and migrant labourers are limited because the work is occupied, and locals would go to their homes. As far as the experiences are concerned, the chances of ethnic clashes are less. Both locals and migrants cooperate and are on friendly terms. In the post-COVID era, where people have returned to their place of origin, migration continues to happen despite various insecurities.

### Implications of the study

Kerala is a state which can relate to migration of all forms. The state is an example of the positive effects of migration. The impact of the gulf wave on Kerala transformed the economic situation for many. Now, as Kerala has turned into a desired destination for people from some specific regions, questions are emerging regarding social security and assistance. The environment has to be productive in giving migrants identity and helping them connect better with the state culture. The vocabulary of ‘Bengali Bhai’, which could basically be any migrant worker from the eastern part of our country, needs to be corrected because every community has an identity that it celebrates and cherishes, so we need a more integrative cultural framework. Being far from home is difficult; social adjustments could be challenging. This study highlights that insecurities and the need for social recognition are low among migrants. In the pandemic scenario, we should have more of a personal approach, accommodating migrants in a social way as well. The study could provide insight into the changing cultural fabric of Kerala.

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## Impact of Covid-19 on Education Industry

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### Abstract

The pandemic has created extraordinary upheaval, resulting in substantial changes in profitability, education, and social connections. Nations globally have enacted diverse methods to regulate the transmission of the virus, such as imposing lockdowns. In India, a nationwide lockdown was imposed, resulting in the closure of all educational institutions and a significant upheaval in the education system. During this crisis, policymakers have faced numerous challenges in formulating effective policies for the education sector.

As a result, there has been a rapid shift from offline to online education, posing numerous difficulties for scholars, educators, and parents alike. While the pandemic has brought about vulnerable circumstances, technology has enabled society to overcome this situation and improve in various aspects. The digital divide has been exposed, and efforts have been made to bridge the gap by adopting digital tools and platforms. A comprehensive analysis is required to assess this digital transformation's impact.

This research aims to investigate the effects of the COVID-19 pandemic on the education sector and the ensuing digital revolution it has demanded. This study examines the technological components of the digital transformation occurring in education and the effects that the COVID-19 epidemic has had on the education sector. It begins by investigating, analysing, and presenting the factors essential for effectively transitioning from offline to online classrooms. Finally, the study proposes various solutions to mitigate these challenges and enhance the educational experience. By tackling these challenges, this study improves comprehension of the digital transition in education during the pandemic.

**Keywords:** Digital Education, E-Learning, COVID-19, Education system, online classes, Digital Transformation

### **Introduction**

By 2020, the COVID-19 pandemic had spread its impact to approximately 215 countries, affecting around 94% of the global population. This unprecedented global health crisis prompted widespread closures and imposed psychological distress on individuals worldwide. Many countries temporarily closed schools to stop the epidemic, affecting almost 90% of pupils. Consequently, education became one of the earliest sectors to confront the challenges posed by these closures.

In India, characterised by its diverse population, lockdown measures became an essential strategy to combat the situation. The digital revolution in education emerged as a response to this phase of closures. It entails incorporating digital technologies into all elements of learning, adding value to students, and significantly changing their educational experiences. Information and Communication Technology (ICT) tools are now fast, user-friendly, and extensively utilised in various settings, including campuses, libraries, learning centres, offices, and homes. Their appealing potential for increased productivity and enhanced performance has garnered interest from managers, administrators, policymakers, and students alike. Consequently, acquiring digital literacy skills has become crucial across all fields of study.

### **Background**

The outbreak of the COVID-19 pandemic in late 2019 and its worldwide spread have had far-reaching significance across various sectors, with the education industry being significantly impacted. The sudden closure of schools and universities, implemented as a measure to contain the virus, disrupted the traditional mode of teaching and learning, requiring a rapid transition to remote and online education. This unprecedented disruption has posed numerous challenges for educational institutions, teachers, students, and policymakers. The pandemic has revealed vulnerabilities and inequities within the education system, exacerbating disparities in access to quality education. It has also highlighted the need for innovative approaches and adaptive strategies to ensure continuity of learning during times of crisis.

By shedding light on the challenges, transformations, and future perspectives of the education industry in the context of the COVID-19 pandemic, this research endeavour aims to contribute



to the body of knowledge surrounding crisis management in education and serve as a foundation for future research and policy development. Ultimately, the goal is to ensure that education remains a resilient and adaptable sector capable of navigating unprecedented challenges and providing quality learning experiences for all, regardless of circumstances.

## **Methodology**

This research paper collects current data from secondary sources such as newspapers, magazines, research papers, Government reports, various websites, etc. Historical and contemporary literature has been used to formulate a research framework and reach an impartial conclusion. Covid 19's impact on Indian education was examined using data. The combined use of quantitative and qualitative methods, along with the inclusion of case studies, strengthens the rigour and comprehensiveness of this research. By integrating diverse data sources and analysis techniques, this study aims to provide an understanding of the impact of COVID-19 on the education industry and offer valuable insights for policy, practice, and future research.

## **Challenges Faced by the Education Industry during the COVID-19 Pandemic**

The COVID-19 pandemic has presented numerous challenges to the education industry, disrupting traditional modes of teaching and learning. The following are key challenges faced by educational institutions during this unprecedented crisis:

- **School Closures and the Shift to Online Learning:** The widespread closure of schools and universities to ensure the safety of students and staff has necessitated a rapid transition to online learning. The abrupt change has presented considerable logistical obstacles for educators, students, and parents, necessitating the implementation of online platforms and digital technologies.
- **Digital Divide and Access to Online Education:** The pandemic has highlighted disparities in access to technology and internet connectivity, exacerbating the digital divide. Students from disadvantaged backgrounds, particularly those in rural or low-income areas, may lack the necessary devices, internet access, or digital literacy skills to participate in remote learning fully.
- **Equity and Inclusivity Issues:** Remote learning has highlighted inequities in educational opportunities. Students with disabilities, special educational needs, or limited English proficiency may face additional barriers in accessing inclusive education. Ensuring

equal access to academic resources and tailored support services has been a significant challenge for educational institutions.

- **Student/Educator Mental Health and Well-being:** Students and teachers have suffered mental health issues from the pandemic. The abrupt transition to remote learning, isolation from peers, and increased stress and anxiety have impacted the overall well-being of individuals within the education system. Addressing mental health needs and providing support services has become a critical challenge.
- **Assessment and Evaluation Challenges:** Traditional assessment methods have been disrupted, requiring educators to find alternative ways to evaluate student learning remotely. Ensuring assessments' reliability, fairness, and validity in an online setting poses challenges in maintaining academic integrity and accurately measuring student progress.
- **Financial Implications and Budget Constraints:** The pandemic has had a significant financial impact on educational institutions. Reduced government funding, decreased enrollment, and additional expenses for implementing remote learning technologies and safety measures have strained institutional budgets. Budget constraints have affected the availability of resources, faculty hiring, infrastructure development, and support services.

Addressing these challenges requires innovative solutions, resource allocation, collaboration among stakeholders, and ongoing professional development for educators. Educational institutions have had to adapt rapidly to ensure continuity of learning, support student well-being, and bridge the gaps created by the pandemic. By recognising and addressing these challenges, the education industry can strive to build a more resilient and inclusive system capable of navigating future disruptions.

### **Evolution in Teaching and Learning Approaches**

The COVID-19 pandemic has necessitated significant transformations in teaching and learning methodologies as educational institutions adapted to remote and online education. The following are critical transformations witnessed during this period, supported by factual data and tables:

- **Rapid Adoption of Online Learning Platforms and Tools**

“According to a report by UNESCO, as of April 2020, approximately 1.6 billion learners globally were affected by school closures, leading to a surge in the adoption of online learning platforms and tools.” Table 1 showcases the increase in widespread online learning platform usage during the pandemic.

Table 1: Increase in Usage of Online Learning Platforms (Percentage Increase)

Platform	Percentage Increase
Zoom	535%
Google Classroom	400%
Microsoft Teams	894%
Moodle	378%

These statistics indicate the widespread shift to online platforms to facilitate remote learning, enabling educators to deliver instructional content, conduct virtual classes, and engage with students.

- **Blended Learning Models and Hybrid Classrooms**

Educational institutions have embraced blended learning models, combining online and in-person teaching. This approach allows for flexibility and promotes a hybrid classroom experience. A Babson Survey Research Group study found that 73% of educators surveyed in the United States considered blended learning more effective than fully online or entirely traditional approaches.

Table 2 presents the key components of a blended learning model.

Component	Description
Online Learning Resources	Access to digital content and resources
Synchronous Virtual Classes	Real-time virtual classes using video conferencing
Asynchronous Activities	Self-paced learning activities, assignments, and discussions
In-Person Interactions	Face-to-face sessions for practical activities, discussions, and assessments

- **Teacher Training and Professional Development in Online Pedagogy**

The transition to remote learning has necessitated the upskilling of educators in online pedagogy and the effective use of digital tools. According to a survey by the “International Society for Technology in Education (ISTE)”, 84% of educators reported that professional development opportunities in online teaching and learning were essential during the pandemic. Table 3 outlines the primary aspects of teacher training and professional growth in online pedagogy.

Table 3: Areas of Teacher Training and Professional Development

Area	Description
Digital Tools and Platforms	Training on the effective use of online tools and platforms for instructional delivery and student engagement
Online Pedagogy and Assessment	Strategies for designing and facilitating compelling online learning experiences, including assessments and feedback
Student Support and Well-being	Techniques for promoting student well-being and providing online support services
Accessibility and Inclusivity	Ensuring inclusive practices and addressing the diverse needs of students in online environments.

- **Innovative Approaches to Engage and Motivate Students**

Educators have adopted various innovative approaches to engage and motivate students in remote learning settings. A study published in the Journal of Educational Technology & Society found that gamification, personalised learning paths, and multimedia-rich content effectively enhance student engagement. Table 4 provides examples of innovative approaches used to engage and motivate students.

Table 4: Examples of Innovative Approaches in Remote Learning

Approach	Description
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Gamification	Incorporating game elements and mechanics into the learning process to enhance motivation and participation
Flipped Classroom	Students access instructional content before the class and engage in active learning activities during synchronous sessions.
Project-Based Learning	Assigning students real-world projects to promote hands-on learning and problem-solving skills
Virtual Field Trips	Utilising virtual reality or online platforms to explore museums, cultural sites, and other locations virtually
Multimedia Presentations	Encouraging students to create and deliver multimedia presentations to enhance communication and creativity skills

These transformations in teaching and learning methodologies have not only facilitated the continuation of education during the pandemic but have also presented opportunities for innovation and enhanced engagement. Adopting online platforms, blended learning models, and innovative approaches has allowed educators to deliver effective instruction and maintain student involvement. Ongoing teacher training and professional development in online pedagogy have been crucial in supporting educators' adaptation to the changing educational landscape. These transformations will likely impact education, paving the way for a more flexible and technology-enhanced learning environment.

### **Impact on Educational Equity and Inclusivity**

The COVID-19 pandemic has significantly impacted educational equity and inclusivity, exacerbating existing disparities and highlighting the need for targeted interventions. The following data and information illustrate the impact on different aspects of educational equity and inclusivity:

- **Access to Technology and Internet Connectivity**

According to a report by UNICEF, approximately 463 million students worldwide lacked access to remote learning during the pandemic due to the unavailability of technology or internet connectivity. Table 1 presents data on the global digital divide and the number of students affected by lack of access to technology.

Table 1: Global Digital Divide and Lack of Access to Technology

Region	Number of Students Without Access to Technology
Sub-Saharan Africa	250 million
South Asia	80 million
Latin America	47 million
Middle East	11 million
Europe	6 million

These statistics highlight the inequities in access to technology, which have disproportionately affected students in low-income countries and marginalised communities.

- **Support for Students with Disabilities**

Students with disabilities have faced unique challenges during the transition to remote learning. According to the U.S. Department of Education, ensuring access to appropriate accommodations and support services for students with disabilities has been a significant concern during the pandemic. A study published in the Journal of Special Education Technology reported that the lack of specialised technology and assistive devices at home has hindered the participation and engagement of students with disabilities in online learning.

- **Socio-economic Gaps in Remote Learning**

The shift to remote learning has widened socio-economic gaps in educational opportunities. A study conducted by the Organisation for Economic Co-operation and Development (OECD) found that students from disadvantaged backgrounds, including those from low-income families or with limited parental education, were at a higher risk of experiencing learning loss during school closures. The study also revealed that students from socio-economically disadvantaged backgrounds had less access to dedicated study spaces, quiet environments, and parental support, further hindering their learning experience.

- **Promoting Diversity and Inclusion in Online Classrooms**

Online classrooms have presented challenges in maintaining diversity and inclusion. According to a survey conducted by UNESCO, a significant number of students, particularly those from ethnic minority groups or with linguistic diversity, face barriers to engaging with online learning due to language barriers, cultural biases, or limited support for their specific

needs. Efforts to promote inclusive practices have included providing multilingual resources, facilitating peer interactions, and adopting culturally responsive teaching approaches.

Addressing the impact on educational equity and inclusivity requires targeted interventions and policy measures. The digital gap must be closed by ensuring all students can access technology and the internet. Particular attention should be given to students with disabilities, ensuring the provision of appropriate accommodations and assistive technologies. Additional support services, targeted resources, and interventions are essential to mitigate socio-economic gaps. Furthermore, promoting diversity and inclusion in online classrooms requires culturally responsive pedagogy, multilingual resources, and support for students from marginalised communities. Educational institutions can improve student equity and inclusion by tackling these issues.

## **Conclusion**

The COVID-19 pandemic has brought unprecedented challenges to the education industry, disrupting traditional modes of teaching and learning. However, it has also paved the way for transformative changes and innovative approaches that will shape the future of education. This research paper has explored the multifaceted impact of the pandemic on the education industry, highlighting the challenges faced, the transformations witnessed, and the future perspectives that have emerged. The challenges faced by educational institutions during the pandemic, such as school closures, the digital divide, and equity concerns, have underscored the urgent need for targeted interventions and inclusive practices. The shift to remote learning has necessitated rapid adaptations, leading to teaching and learning methodologies transformations. Blended learning models, the rapid adoption of online platforms, and personalised and adaptive learning approaches have emerged as key trends. These changes have been supported by teacher training and professional development programs, fostering resilience and agility within the education system.

In conclusion, while the COVID-19 pandemic has presented immense challenges, it has also catalysed transformation and innovation in the education industry. By embracing the emerging changes and opportunities, the education sector can build a resilient, inclusive, and learner-centric system that prepares students for the dynamic and digital future. Scholars and practitioners can further contribute to understanding the Teacher Professional Development, Student Engagement and Motivation, Assessments and Evaluation challenges and

opportunities within the education industry. The findings can inform policy decisions, shape effective interventions, and contribute to building a more resilient, inclusive, and learner-centred education system for the future.

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## The Study of EHR in Improving the Security and Quality of Healthcare Services: Comparative Analysis Study

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### Abstract

In a developing country, Information Technology plays a vital role in the digital age. Most of the govt& also private hospitals manage the history manually or computerised, which makes it very intricate to manage and access history anytime, anywhere, over any device during emergency cases. Every person faces challenges nowadays; healthcare institutions are scattered, unorganised, and redundant repositories of patients' health history and prescription records. As a result, patients who need emergency or urgent medication face unnecessary, tedious filing systems every time they pass the redundant checks and fill in the long patient record data. This study aims to design and develop a next-generation state-of-the-art, interoperable, and sustainable shareable e-healthcare system model with unified integration strategies (UIS). The selected private and public hospitals to form a small, clustered federation are proposed to be selected for the primary observation, investigation, analysis, and alleviation through designing a secured solution with energy efficiency overcloud.

**Keywords:** EHR, UIS, E-Healthcare.

### Introduction

An E-Health Record (EHR) is a patient's digital platform. EHRs are patient-centred, real-time records-maintaining systems which provide authorised users with information promptly & securely [1, 2]. While a patient's medical and treatment history is contained in an EHR system, it is designed to extend above conventional clinical data gathered in a specified manner by providing a more comprehensive view of the patient's treatment.

EHRs have been found in IT & could include medical history, diagnosis, medicines, therapeutic plans, vaccination dates, allergies, radiology & laboratory, and test results. It enables proof-based tools for providers to decide on patient care [3].

A significant aspect of an EHR is the production & management of health info by authorised providers in a digital format shared by more than one healthcare institution with other providers [4]. EHRs are designed to exchange information with other healthcare professionals & organisations, such as laboratories, specialists, medical imaging, pharmacies, emergency services & schools, and workplace clinics. They also contain information from all patient-care clinicians [5]. Our world has dramatically changed with digital technology - our everyday life & our method of communication have been turned into smartphones, tablets & Web-enabled gadgets [6]. Medicine is a comprehensive information company. A growing and more transparent flow of information inside an electronic health record (EHR) digital health infrastructure covers & utilises digital advances and can alter how treatment is given & compensated. EHRs provide info wherever it is required [7].

EHR is meant to make medical information about patients accessible in practice and whenever a person requires treatment from physicians & healthcare professionals [8, 9]. EHR systems are intended to precisely store data in a searchable digital form to track a patient's status determined with the main benefits: Reduction of the need to monitor prior medical documents of a patient to allow reliable and legible information to be available; Minimize data replication; Extraction of medical data to evaluate trends & long-term changes in a patient; Facilitation of population-based studies [10].

#### **A. Cloud-based EHRs**

On-demand scalable access to IT services can be provided through cloud-computing platforms [11]. They could quickly supply & implement an EHR system & minimise administration efforts and costs. However, it is vital to comprehend the advantages and challenges linked with a cloud-based HER [12].

- Decreasing the expense of up-front hardware & software
- Decreases continuous maintenance costs
- Let's you begin smaller and grow IT distribution as required [13].
- Provides a greater degree of availability of services than in-house IT services

- Decreasing failures in runtime

### **B. Green Cloud Computing in Healthcare**

- The healthcare industry is rising rapidly & plays a significant role in the global economy. Energy efficiency and forestation in health care are ideal ways of addressing the climate crisis. Technology has revolutionised the global healthcare industry - from new test methods to better operating equipment, remote health monitoring technologies using modern digital devices, etc. [14].
- Many healthcare websites are available online. These portals securely provide patient information [15].
- Cloud computing allows for continuous communication from one platform to another anytime and anywhere. In healthcare organisations, data portability is possible within different medical devices utilising another medical device in another healthcare organisation. Cloud technology allows the retrieval of various treatment databases, patients, and diseases that doctors can quickly access for investigation and statistical understanding [16]. The other system gives access to a database service [17]. This involved a lot of healthcare information, data, and computing. At the time of treatment, this technology gives historical patient data [18]. If patients move from one department to another for many analyses and experiments, this leads to a higher rate of knowledge conversation among different medical departments [19,20]. This technology helps healthcare practitioners provide comprehensive and accurate patient treatment information [21].
- Adequately compensated parts of the healthcare area are usually Hospital Information Systems (HIS), with electronic medical records (EMR) used for computer-aided procedures and remote patient healthcare services [22,23]. By improving ITs in medical services, the industry faces challenges in digital data, but they can provide various medical services that can be used for better results through cloud computing [24].
- Cloud technology in healthcare can significantly increase hospitals' energy quality and knowledge of the most significant way to improve healthcare energy performance economically [25, 26].

### **C. Significance**

Several healthcare providers have discovered that EHRs enhance the management of medical practice by improving the efficiency of practice & cost savings [27]. EHRs take advantage of several medical procedures, including:

- Low price of transcription.
- decreased pull chart, storage & repository expenses.
- Enhanced possibilities for documentation & automated coding
- Reduced medical error through improved patient access & error prevention signals
- Improved patient health/quality of treatment, improved management of diseases & patient Education [28].

### **Problem Statements**

- a) Managing and accessing anytime, anywhere, over any device during emergencies is very complex.
- b) Institutions are the scattered, unorganised, and redundant data repositories of the patient's health history, and prescription records are spread over multiple systems in several hospitals/ clinics/ laboratories in the current practices.
- c) The data access & control level is lower than the EHR system on the ground.

### **Research Objectives**

- a) To explore and examine the significant issues and challenges in the primary healthcare system.
- b) To share the e-healthcare system model for unified transformation & integration of the existing healthcare record-keeping system.
- c) To develop a Federated Green e-healthcare Record Repository System Model over the Cloud to provide enhanced healthcare data and information services anytime, anywhere, over any device manners.

### **Literature Review**

<b>S. No.</b>	<b>Title, Authors &amp; Year &amp; Journal Name/Conference</b>	<b>Major Findings / Contributions &amp; conclusion</b>	<b>Critical Remarks to find out the research ability for the proposed research</b>
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	Name		
1	<p>“proposal for an eHealth Dependent on Ecosystem Serving National Healthcare " by Eirini C. Schiza, Theodoros C. Kyprianou, Nicolai Petkov, 2018, in the IEEE Biomedical &amp; Health Informatics Journal.</p>	<p>The research attempts to resolve the critical challenges in developing an interconnected, interoperable national health system that includes entire populations.</p>	<p>This study is relevant and helpful to the proposed research and provides input to the intended study. However, the eHealth system is designed based on the perspective and context of the European country Cyprus. It is difficult for a small country to apply the proposed methodology and approach. The study does not classify organisations currently using EHR or not [29].</p>
2	<p>Towards Jordan's National Electronic Health Record System "Majd M. Alzghoul1 Majid A. Al-Tae2 Anas M. Al-Tree, International System, Signal, &amp; Device Multi-Conference 2016.</p>	<p>The significant contribution of this study is designing a central middleware architecture that enables seamless data &amp; service sharing between Local EHRs and global remote EHR databases System.</p>	<p>This study provides excellent input for the proposed research with closer relevance. The researcher proposes an architecture to integrate fragmented EHR, but the question raised here is how the data could be shared and accessed between different stakeholders. The EHRs comprise sensitive data that has to be protected from any unwanted access, but the researcher failed to explain access control techniques, confidentiality, and privacy of patient records</p>

			[30]
3	<p>“Digitizing patient data-some perspectives &amp; recommendations for India”, by W Main St, Morehead, KY, 2019 in <i>Journal of BMJ Health &amp; Care Informatics</i></p>	<p>This study focused on the current status of National EHR and some Considerations when implementing an EHR system, such as Scalability, interoperability, &amp; flexibility to add new features.</p>	<p>This study links to the proposed research in a localised context. It shows the current state-of-the-art healthcare record management status in India. This study allows us to think about the solution to the problem in multiple dimensions and better come up with new knowledge [31].</p>
4	<p>“Need Assessment Framework for Electronic Health Record Management System In India” by Anteneh Aklilu Addis Ababa University, 2012, <i>Publish in course hero</i></p>	<p>The primary focus of this study is to design an architectural framework for electronic health record management to provide standardised health-related information for governmental and private health institutions and hospitals.</p>	<p>The study is related to the proposed study, which gives the best idea of the proposed study. Most of the issues raised in this study are input to the proposed study [32]. However, the shortcomings of this study are network infrastructure, security, privacy, and interoperability, which can be taken care of but are missing.</p>

5	<p>“Electronic discussion system design: Electronic consulting services Rama Health” By Parichart Pronsawatcha, Suchitra Auefuea, Adisak Narththanu, 2018 in <i>IEEE Conference Proceedings</i></p>	<p>The research aimed to study &amp; strategy a new system of electronic consultation, which Influences the collaboration between professionals improves service quality, especially in discussion procedure.</p>	<p>The study is relevant to the proposed research, but the researcher generally focused on health centres using EHR; health centres using paper-based medical records were not considered [33].</p>
6	<p>“Intelligent health systems to enhance health services performance” by Sepideh Poorejbari, Wathiq Mansoor in <i>(ICSPIS) IEEE 2019</i></p>	<p>This article aims to illustrate the importance of computer technology in the general health sector, particularly cloud-based solutions. Cloud-based pervasive health care has numerous potential &amp; positive qualities and is a new paradigm in the health industry.</p>	<p>Future researchers still have to tackle several issues &amp; obstacles, such as monitoring, daily living help, medical care, general access, emergency management, or an intelligent hospital. It is vital to design a functional healthcare system to manage emergencies or medical attention [34].</p>
7	<p>“Research into Cloud, Green IT, &amp; Data Science Making Healthcare Green Reduce the costs in the health care field &amp; Combat climate change” by N. Godbole, J. Lamb in IEEE 2018.</p>	<p>The study's primary objective regarding Green Health, Green Computing, &amp; Green IT is to minimise &amp; save money on power consumption. A significant problem for the health industry is enhancing this complicated system's</p>	<p>It is closely related to the proposed study that in healthcare, cloud technology may substantially enhance the IT energy efficiency of a hospital with knowledge of the best ways to increase energy efficiency in healthcare at a low cost [35].</p>



		energy efficiency and sustainability.	
8	<p>“Electronic health recording systems cryptographic access control: a safety involvement”, by Pasupathy Vimalachand, Hua Wang, Yanchun Zhang, 2017 in <i>International Conference, Puschino Russia</i></p>	<p>The study revealed a cryptographic-based access control approach for electronic health records preserves high safety.</p>	<p>This study is essential for the proposed research since it lays the security measures. However, this security measure applied to the proposed Shared EHR system can be considered a critical input in localised conditions [36].</p>
9	<p>“Operationalize data compliance using Cloud-hosted sharing of healthcare data, Benjamin Eze, Craig Kuziemsk, Liam Peyton, 2018” in <i>International Workshop on Software Engineering in IEEE Healthcare Systems</i></p>	<p>The study suggested an operationalising privacy compliance framework for sharing cloud-hosted healthcare data.</p>	<p>This research helps the proposed study by generating a supportive concept. i.e. how to anonymise patient information for research purposes and other issues. The researcher didn't show the methods and tools for de-identification. The interoperability concept is missing. [37].</p>

### Research Design, Approach, and Methodology

A methodology is essential for guiding the research clearly according to the drafted objectives of the research work. The following methods are proposed for conduct to achieve this study's goals.

#### **A. Research Design**

This research study proposes to use an empirical and constructive research design with a mix of qualitative and quantitative research approaches.

Initially, this study explores the feasibility of shared electronic health records (EHR) over the cloud for enhancing interoperability and data exchange. It explores the answers to the questions raised in the study. Further, the study constructs a cloud model that can improve the greenness of healthcare data and information services anytime, anywhere, and over any device. The selected private and public hospitals to form a small clustered federation in the state of Rajasthan are proposed to be selected for the primary observation, investigation, analysis, and alleviation through designing a secured solution with energy efficiency overcloud. The proposed research is exploratory applied research focusing on three aspects: Investigation and Analysis of greenness, developing a green services migration model over the cloud, and validating the results with stakeholder acceptance and demonstration.

#### **B. Research Approach**

The objectives of the proposed study, qualitative and quantitative research, are proposed to be held. The fundamental benefit of qualitative research is that it gives a complete overview and interpretation of the problem without limiting the scope of the research and the participants' responses. This study proposes to use the qualitative research method because the study planned together data through open-ended questions, and the quantitative research method is also proposed to gather data through close-ended questionnaires so that the results could be presented statistically. The quantitative analysis describes, infers, and resolves numerical problems. The collection, the summary, and the drawing of inferences from these data are emphasised.

#### **C. Research Processes**

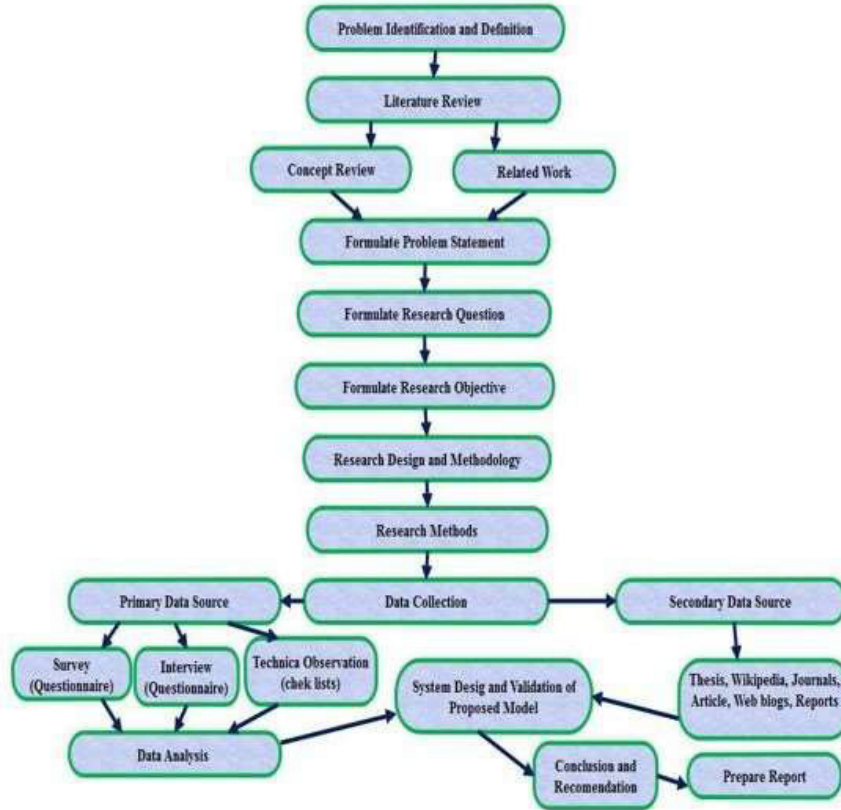


Fig. 1. Research Processes

#### D. Data Analysis Methods and Tool Selection

Tools are selected based on necessary features, availability, suitability, platform independence, and openness.

- **Python:** Python programming language for implementing a prototype of the proposed system [37].
- **Google Forms:** It is a survey administration application. It is one of the simplest ways to gather online data without much difficulty.
- **Edraw Max:** Edraw Max for designing conceptual diagrams. It is a compelling, all-in-one platform that can serve all purposes.
- **SPSS:** SPSS is used for data analysis. It is a comprehensive and flexible mathematical research and data management tool for social sciences
- **Cloud Simulation:** This study proposes to use Clouds for real-time simulation.

Cloud Sim is a cloud computing substructure & services modelling or simulation framework. CloudSim is a cloud computing infrastructure & services modelling or simulation framework. At first, it was explicitly developed by the Laboratory for Cloud Computing and Distributed Systems (CLOUDS). CloudSim is among the most common open-source cloud simulators in research and academia.

It offers cloud computing component systems and behaviour modelling. Cloud environments with performance evaluation applications can provide valuable insights for exploring complex, massively distributed, and scalable environments [23]. The key benefits of simulation are:

- **Cost benefits:** It can be very costly for any application in the cloud to first design, develop, test, and then reshape, restore and test. Simulations exclude the building and rebuilding process using the model already built in the design phase.
- The configuration flexibility [24].
- Easy to use and customise.

### **Conclusion and Future Scope:**

There is a lack of research defining patients' prior healthcare record-keeping practice and aiming to design and implement shareable EHR over the cloud. The proposed nationwide shared EHR system allows data sharing between different health sectors, which will help further investigation, reporting, decision-making, etc. Thus, our proposed system can handle numerous issues regarding observing patients distantly, standard daily tests, giving appropriate individual arrangements, and allowing people like specialists and family members to access patient data. In emergency cases, specialists can quickly check a patient's prior healthcare data, which will help provide better and faster care to the patient and protect from several problems and issues related to health. There are different help types in the medical care area, such as checking everyday life health status, clinical help and intelligent medical care clinics that should be focused on in the future. Patient information access rights should be an essential concern for researchers when providing security and privacy when sharing healthcare data over the cloud. So, Energy efficiency, security, and privacy of patients' case-sensitive data are the most critical issues that should be dealt with with care and accountability.

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## **An Incentive-Based Novel Framework for Carbon Footprint Reduction Using Blockchain and Cryptocurrency**

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### **Abstract**

In this research work, we are proposing an incentive-based mechanism that rewards the users with crypto tokens for reducing their carbon footprint, either by using carbon-efficient devices, planting trees or using eco-friendly transportation modes like cycling or walking. The whole concept is based on the fact that if one can be rewarded for green (eco-friendly) living, it will encourage many to follow the same & this will, in turn, not only reduce the overall individual carbon footprint but will also reward the “good doers”. This concept relies on blockchain-based proof of work that gets validated through crowd-sourcing. We intend to propose a framework that can be worked on further to be developed as an application based on blockchain that ensures decentralised credentials storage and rewards crypto tokens for completing a particular task. This paper deals with incentivising individuals to reduce their personal carbon footprint, and the same model may be scaled to organisations for taking up the same task.

**Keywords:** Carbon Footprint, Blockchain, Cryptocurrency

### **Introduction**

The term ‘save the environment’ recently saw a spike in Google searches, as evident from Figure 1. This clearly indicates an ongoing mass awakening related to the concerns governing our life here on planet Earth. The environment is fragile. Hence, it’s crucial for humans, the strongest species, to be aware of their role in the conservation and reinforcement of the ecosystem of this planet. Also, there seems to be missing a technological framework that can connect conscious individuals and reward them for carrying out eco-friendly activities, which

will, in turn, lure many to follow eco-friendly activities consciously. This will aid in shifting behaviours towards a more sustainable future. With the advancements in Blockchain technology and the alluring prices of cryptocurrencies, one can think about integrating all these into a consolidated framework that connects with nature and revolutionize the ongoing undercurrent where individuals are willing to do their bit towards the conservation of this planet's ecosystem. We need to note that until or unless we shift the environmental concerns to individuals and give them a platform to participate, we will not be able to engage in a fruitful dialogue or, better to a fruitful scenario that favours the sustainability of this planet as a giant living organism.

### **About Carbon Footprint**

The issue of climate change stands as a paramount global concern, captivating the interest of scholars, policymakers, and various experts worldwide. Its repercussions, including global warming, ecological disruption, technological and economic challenges, and societal impacts, have intensified further. The escalating levels of greenhouse gas emissions are widely regarded as a central contributing factor to this multifaceted dilemma. [1] Our carbon footprint encompasses the cumulative emissions of greenhouse gases, such as carbon dioxide and methane, generated through human activities. Consequently, the international community has prioritised the reduction of greenhouse gas emissions. According to the Kyoto Protocol, which identifies six primary greenhouse gases with significant environmental impacts—CO<sub>2</sub> (carbon dioxide), CH<sub>4</sub> (methane), N<sub>2</sub>O (nitrous oxide), HFCs (hydrofluorocarbons), PFCs (perfluorocarbons), and SF<sub>6</sub> (sulphur dioxide)—carbon dioxide emerges as the predominant contributor among them. [2]

Cities are responsible for 80% of global carbon emissions due to human activities. These activities, such as burning vehicle fuels and generating power, release significant amounts of carbon dioxide into the atmosphere. Additionally, construction and industrial operations contribute substantially to carbon emissions. Consequently, the global academic community has focused on developing strategies to mitigate carbon emissions. Carbon emission monitoring at various levels—product, organisational, municipal, and national—has emerged as a valuable tool for informing environmental plans and policies to reduce carbon emissions. [3]

### A. Low Carbon Lifestyles

Various methods and practices can aid an individual in reducing carbon emissions.[4] These different practices are tabulated in Table 1. These activities will calculate the reward points through the attached weightage. Weightage is calculated on a per-day basis to ease the mining of reward points or crypto currency. The individual carries out these activities and submits a claim that can later be verified as proof of work. Also, an individual can collect reward points to verify someone else's POW claim.

Table 1: Sample Carbon Footprint Reduction Tally for Claimers

(Claimer's) Practice / Method	Annual CO2 Reduction (ACR)	Weightage = ACR / 365
Switch to CFLs	84 kg per replacement	0.23
Use a table lamp while studying	57 kg per change	0.16
Come out and play	62 (to 93) kg per person	0.17
Switch from a desktop to a laptop	205 (to 279) kg per person	0.56
Switch off lights and fans when they are not being utilized.	28 kg per household	0.08
Buy BEE 5 star rated appliances	36 kg on every fan	0.10
Opt for a frost-free refrigerator with a BEE 5-star rating, which consumes 269 kg of energy per unit, translating to 0.74 on the scale.	269 kg on every refrigerator	0.74
Utilize a split air conditioner with a BEE 5-star rating, boasting a capacity of 1.5 tons.	283 kg on every air conditioner	0.78
Install a solar water heater	687 kg on every installation	1.88
Use the geyser efficiently	344 kg per household	0.94
Reduce the temperature setting on the geyser (60 to 40 degrees)	172 kg per household	0.47
Gather for meals and heat food collectively to minimize unnecessary microwave oven usage, even if it's just for 5 minutes per day.	30 kg per household	0.08
Opt for the cold cycle setting on your washing machine, which consumes 98 kg of energy per cycle, equivalent to 0.27 on the scale.	98 kg per washing machine	0.27
Turn off appliances by unplugging them from the power source, resulting in energy savings of 106 kg per household, equivalent to 0.29 on the scale.	106 kg per household	0.29
Utilize paper sparingly and only when necessary.	87 kg for every user	0.24
Opt for electronic statements whenever possible.	5.22 kg for every user	0.01
Avoid using new paper for rough work; instead, utilize one side of previously used paper for rough drafts.	870 kg for every 100 students	2.38
Utilize textbooks responsibly and pass them on to juniors after maintaining them well; imagine if 100 students did this with their 10 textbooks each.	870 kg for every 100 students	2.38
Engage in tree planting efforts as one tree can absorb between 3.66 to 10 kg of carbon dioxide annually. Consider planting and nurturing 50 trees to amplify the impact.	183 (to 500) kg	0.5
Carpool to work	1321 kg	3.62
Take a bus to school	477 kg	1.30
Get driven to work in a bus	1194 kg	3.27
Opt for walking for short distances instead of driving.	11 (to 48) kg per vehicle	0.03
Turn off your vehicle's ignition while waiting at red lights.	48 (to 64) kg per vehicle	0.13
Ensure to keep vehicle tires properly inflated on a regular basis.	150 kg per vehicle	0.41
Incorporate the use of pressure cookers into your daily cooking routine.	125 kg per household	0.34
Adopt cooking techniques that are fuel-efficient.	62 kg per household	0.17
Implement kitchen waste composting at home.	68 kg per household	0.19

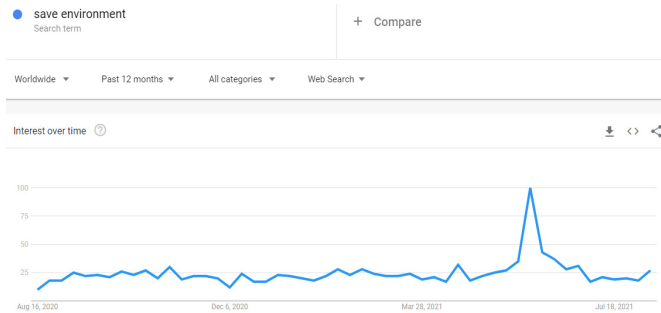


Fig. 1. Google trends results for the term 'save environment'.

## About Blockchain

Cryptocurrencies and blockchain technology appear to be among the most popular and widely used technologies today. They quickly become the most significant trend in the modern world and appear suitable for many uses. This technology is growing increasingly popular day by day. Blockchain technology, the backbone of cryptocurrencies, is often regarded as the primary disruptor of global corporate systems. Bitcoin is a cryptocurrency application that functions as an international, peer-to-peer, entirely decentralised payment and transaction system with no centralised control or power. Thousands of computers worldwide run blockchain apps cooperatively maintained and supported by regular people and computer experts (collectively called miners). Bitcoin transactions are carried out between interested persons via a peer-to-peer network without intermediary banks or individual participation, obviating the need for a middleman. Satoshi Nakamoto, the developer of Bitcoin, created it in 2009. The popularity of blockchain technology has skyrocketed, and the number of applications has exploded. Blockchain is a decentralised ledger that is used to track transactions. It is a comprehensive, open-source technology with numerous encryption methods behind it. Proof of Work (PoW) is a decentralised consensus mechanism where network participants must utilise their energy to solve it. [5]

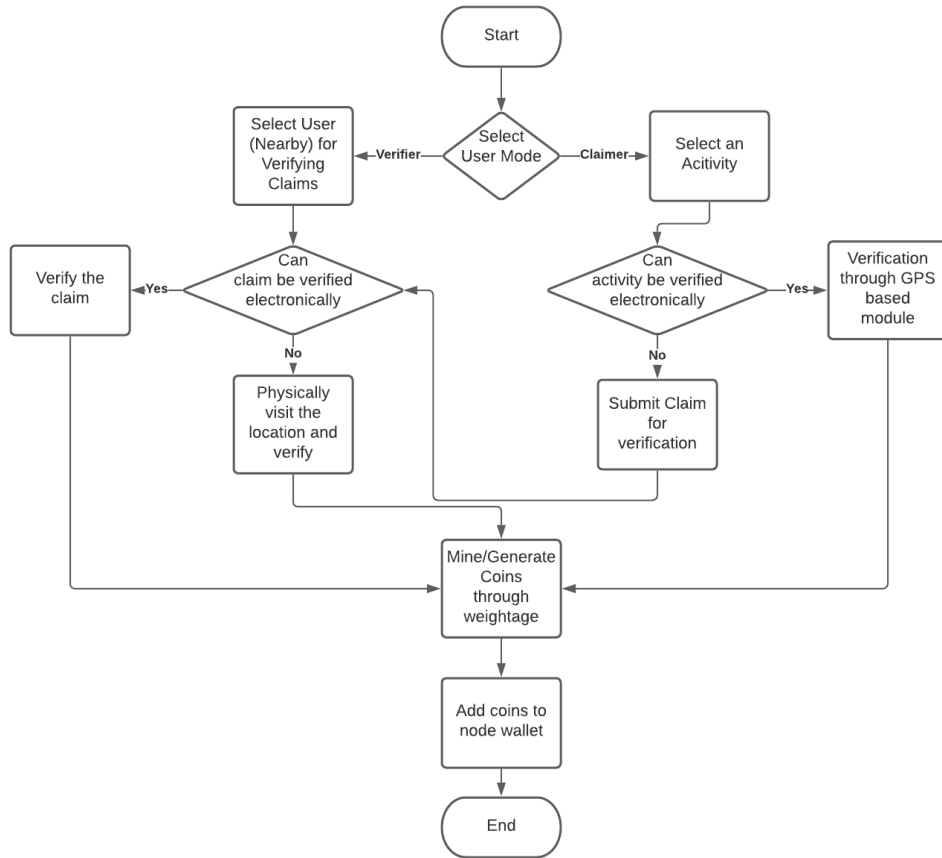


Fig. 2. Flowchart of Proposed Mining & Reward Mechanism.

## Coin Mining & Reward Mechanism

The proposed mechanism will work through an application that runs on a node, which can be either a mobile phone, desktop, or laptop, and tracks daily activities undertaken by a user of this application. The user everyday selects an activity (but is not restricted to) from Table 1 and fulfils it, and furthers a claim. This claim can then be verified through another user who takes up the task of ascertaining the Proof of Work by another user or the claim can be verified electronically through submission of digital data like Coordinates and photographs. Every user is a claim maker and a verifier by default, and every verification per day will lead to the mining (generation) of reward points in addition to all claims settled. The whole data resulting out of everyday activities can be stored on a blockchain and will lead to mining of Reward Coins upon verification. The Mobile App must also have enabled a GPS mechanism to track user activity like travelling and physical verification of assets like Trees, solar power panels or windmills. Figure 2 represents the process flowchart of the proposed mechanism. The user works by selecting a user mode, which can be a Claimer or Verifier. Then, the user selects an activity and performs it; the system, by default, catches the coordinates in the GPS

Module and time duration to make calculations in displacement activities like walking or driving to verify claims. Hence, if there are  $n$  number of claims and  $m$  number of verifications, then the total number of coins mined per day will equal the weightage of every verified claim activity and the number of verification rewards.

The daily ledger will be created and stored for a maximum of days until it is verified and coins are added to the wallet. For the algorithm to work, there is a requirement of verifier and claimer mode of operations; the verifier can either verify through personal discretion the digital evidence submitted by the claimer or can travel to the place of claimer's physical spot to verify the physical assets as claimed by the claimer. An everyday ledger will only include all verified claims and verification reward points as per the weightage assigned. The claimer can submit scanned documents like bills or photographs for claiming reward points to certain activities mentioned in Table 1, and for certain activities which cannot be verified electronically, a verifier can be rushed to a spot, which will be rewarded through reward points.

$$\text{Per day Coins mined} = \sum_{i=1}^n \text{Verified Claim's Weightage} + \sum_{j=1}^m \text{Verifier Reward Weightage}$$

The verifier's activity can be weighed in two modes, electronic verification and physical verification, where the weightage of physical verification will be higher over electronic verification. Also, the verifier can earn more points by claiming one of the travelling activities, like cycling or sharing a ride or travelling through bus to the claimer's spot, that which can be verified electronically.

### **Similar Work**

ECO Coin is one such initiative that deals with rewarding cryptocurrency. Natural resources back ECO coins. A single tree backs each ECO coin. This establishes a new gold standard, tying every coin in circulation to a specific aspect of the environment. Unlike many other cryptocurrencies, using a backing for ECO Coin will also provide inherent value to each coin. Owners of trees can trade them in for ECO coins. The owner will receive one ECO coin for every ten trees. The trees are held in escrow, which means that the original owner retains ownership while the tree is in the care of the ECO coin foundation. A nominal price is charged to authenticate the tree's validity, existence, and ownership (s). This price is paid

every 100 years to preserve the tree's authenticity. This is one of the two ways an ECO coin can be created. Because each tree owner obtains one ECO for every ten trees, the remaining nine ECOs can be added to the system through sustainable actions or other means. Certain blockchains, such as Bitcoin, use a Proof of Work consensus algorithm to safeguard their networks. Though this technology is reliable, it is becoming obvious that the energy consumption of such a system is unsustainable. As of this writing, some reports suggest that Bitcoin mining consumes the same energy as Denmark. Eco-credits (ECOs) can be earned by opting for a meatless dinner, switching to a renewable energy provider, or commuting to work by bicycle. These eco-credits can be redeemed to purchase environmentally-friendly products, services, and experiences in our sustainable marketplace. This is a new way to track, measure, and reward sustainability so you may help others while also getting compensated. ECO coins are kept in a digital wallet that may be accessed via a mobile device. Inspectors, smart IoT integration (for example, a smart thermostat connected to your phone), certified vendors verify sustainable behaviours. [6]

### **An Initiative to Reduce Carbon Footprint**

The proposed mechanism will work through an application that runs on an individual node and shall make reducing carbon footprint very individualistic. This if gets popular, it can aid in the significant reduction of personal carbon footprint and can aid in reduction of Carbon Dioxide and other green-house gases in our atmosphere. Any initiative in this direction, if adequately publicised and regulated, can help in the betterment of our environment as the individuals who participate get rewarded for the same. The list of activities in Table 1 is tentative and can be expanded or reduced per the requirement. The weights can be calculated more boldly to compensate for more information when required. With the growing concerns of the world community towards the reduction of greenhouse gases, similar initiatives are expected from Individuals and Industries, and if such a mechanism is worked upon properly, it can lead to more significant outcomes in terms of reward-based natural mass mobilization towards fulfilling the millennial goal of reducing the Individual and Industrial Carbon Footprint.

## Future Work

The proposed mechanism is scalable and can accommodate industries with modifying Table 1 and adding new activities with new weightages to it. Presently, we are only calculating weights by dividing the Annual CO<sub>2</sub> Reduction (ACR) by 365, i.e. number of days in a year. This is being done to calculate everyday coin minting. The coins can be mined through a much more rigorous algorithm that takes in more inputs and verifies claims through machine learning and AI. In the future, physical claims can be verified by physically visiting the spot or using Remote Sensing and imaging techniques to auto-verify plantations and renewal energy logistics.

## References

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