

**National Conference**

**On**

**"IMPACT OF NEP 2020 AND ACCREDITATION ON EDUCATION "**

**29<sup>th</sup> July , 2022**



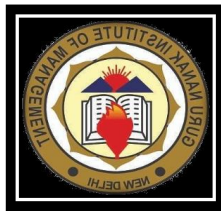
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### **THEMES :**

- Accreditation in Higher Education
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- Education and Skilling in Cyber Security
- Role of Library and e - resources on Institutional development
- Human Resource Management in Higher Education System
- Ethics in values in Higher Education System
- Efficient Development and Delivery of Curriculum
- Mechanism for student's feedback and it's analysis
- Use of MOOC in Teaching- Learning



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# **Work from Home: Scenarios Exhausting or Draining during On-Line Teaching**

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## **Abstract:**

Work from home describes work being done remotely, instead of at an office. The acronym “[WFH](#)” is used as a nickname for the concept. Many organizations/institutions transitioned their employees from the office to a work from home model during the [Corona virus global pandemic](#). Synonyms for Work from Home is Working from home, Telecommuting, Working remotely, Virtual work. Work from home (WFH) is a concept where the employee can do his or her job from home. Work from home gives flexible working hours to the employee as well as the job for the employer is done with ease. Work from home is helpful to delivering work life balance to the employee, and also parallelly helps the company to get the work done. Nowadays, most of the employers are offering this option to their employees. Work from home (or working from home) is a modern work approach enabled through internet and mobility where in irrespective of the physical location of an individual work can be done. Work from Home is also known as working remotely or telecommuting which implies that the employee is working from a remote location usually home. Work from home as a concept is very important in current times. It helps to keep productivity of the employee same or even better and at the same time supports the employee for being with family or handling some personal work. Also in the case the employee is facing some health issue of self or family, Work from Home (WFH) can be a great tool for helping employee stay at home and work at the same time. Public teachers scored 90 percent on adjusting to new pedagogical practices whereas private teachers scored 97 percent in this area.

**Keywords:** Teachers, On-line teaching

## **Introduction:**

The world has witnessed, and continue to do so, a once in a century crisis in the form of Covid19 pandemic. It has not only resulted in unprecedented fatalities and infections among people of almost all nationalities but also wreaked havoc in every sphere of life, including business. In the absence of a vaccine and highly infectious nature of the pathogen of Covid-19 coupled with the strict guidelines issued by World Health Organisation had forced the governments to take some of the sternest measures in the form of nationwide lockdowns to arrest, as far as possible, the spread of the virus so to save maximum lives.

Restriction on movement and the necessity of maintaining proper physical distance among people to prevent the spread of the virus has ensured that businesses during the lockdown period were and post unlocking phase will not be as usual. Nearly every organisation is caught unprepared to respond to this extraordinary challenge. Many employers, if not all, are trying to explore the Work From Home (WFH) as a potential substitute to prevailing work arrangements in foreseeable future. Hence, Employers' Federation of India (EFI), which is serving the cause of Employers' since 1933, decided to come up with a document on WFH to facilitate its members, clients and partners regarding WFH to respond to the prevailing crisis or for those who see the same as an opportunity to replace the current jobs or co-opt WFH along with the current working pattern as a hybrid model.

WFH means **an employee is working from their house, apartment, or place of residence, rather than working from the office**. Many companies have a WFH policy, or remote work policy, that allows their employees to work from home either full-time or when it's most convenient for them.

The unprecedented crisis of Covid-19 has ensured that be it, employers or employees, everyone has some sort of idea about WFH, however, it largely varies based on different perceptions. In academics also there is no consensus over one definition of WFH. WFH is often interchangeably used as Telework, however, there lie some inherent differences between the two. WFH can be construed as a subset of Telework, as telework not only includes the work performed from home but also the work which can be performed while travelling.

WFH is an alternate way of organising task that may be defined as the work which can be performed from home (away from the traditional workplace such as factories or offices) and enables employees to access their labour activities through the use of information technology.



(Nilles, 1997; Perez et al., 2003). It may be for a temporary period or for the long-term durations as an alternate to the traditional way of doing work.

Work from home as a concept is very important in current times. It helps to keep productivity of the employee same or even better and at the same time supports the employee for being with family or handling some personal work. Also in the case the employee is facing some health issue of self or family, Work from Home (WFH) can be a great tool for helping employee stay at home and work at the same time. In 2020, during Coronavirus (COVID-19) Pandemic, Work from Home enabled many companies to remain productive and keep themselves relevant. Roles like IT, Management, Designing, Media etc. continued to work with the WFH option.

For many individuals coronavirus (COVID-19) put work on hold. Employees and business owners of many industries/organisations could not transition to a work from home model. For many service providers, however, Coronavirus has pushed them to [utilize technology further](#), and address how they can efficiently and effectively continue to work and function, through digital means. [Digital adoption is a key factor](#) in determining how quickly and efficiently a company can function virtually.

Before COVID-19 hit, the option of working from home was available to only 7 percent of the U.S. workforce, mostly highly paid white collar workers. That percentage has increased more than nine-fold to 66 percent of employees in the weeks since the pandemic barred everyone not designated an essential worker from going to their jobs. This abrupt change means that a lot of people accustomed to working in their offices are finding new ways of doing their jobs.

Working from home isn't easy, even for those who have been doing it for years. There are distractions, from chores to pets that you used to leave behind when person "went to work." It's also difficult to develop, and stick to, a new routine.

**Pablo A. Lizano (2021)** conducted a study on "Teacher teleworking during the Covid-19 pandemic: Association between work hours, work-family balance and quality of life". Teachers from across Chile were contacted via email and social media to answer an online survey. QoL was evaluated via the SF-36 questionnaire, work hours and work-family balance in the pandemic. A total of 336 teachers from across Chile participated in this study. Teachers had a low QoL score, associated with age ( $p < 0.05$ ). Teachers who were  $\leq 44$  showed lower

deterioration risks in the Physical Component Summary (OR: 0.54) than the  $\geq 45$ -year-old age group; simultaneously, the younger group ( $\leq 44$  years) had a greater risk (OR: 2.46) of deterioration in the Mental Component Summary than teachers over 45 years. A total of 78.7% of teachers reported having increased their work hours during the COVID-19 pandemic due to teleworking and 86% indicated negative effects on their work–family balance. Pandemic work hours and negative work–family balance increase the risk of reducing the Mental Component Summary (OR: 1.902; OR: 3.996, respectively). Teachers presented low median QoL scores, especially in the Mental Component Summary, suggesting that it would be beneficial to promote a better workload distribution for teachers in emergency contexts, considering the adverse effects of teleworking.

**Umesh et al. (2021)** studied on work from home during Covid-19 pandemic: Employees perception and experiences with a sample size 454 respondents and structured questionnaires and google forms were used to collect data. The study revealed the employees stress factors like lack of resources, long hours of work, overload, poor management support, domestic pressure etc and employees equally concentrate on both office and home work.

**Barrero et al. (2021)** COVID-19 drove a mass social experiment in working from home (WFH). It survey more than 30,000 Americans over multiple waves to investigate whether WFH will stick, and why. It provided evidence from waves of a large panel of US employees working from home. Respondents report benefits from lower commute time, more flexible work hours, and increased productivity. Employers have made investments in technology, revised practices, and moved up the learning curve with respect to WFH. They suggest that use of WFH will remain four times more prevalent than before the pandemic.

[Islam et al. \(2020\)](#) The outbreak of COVID-19 has taught us that change is inevitable. The first preventative step suggested by WHO was social distancing. Every country closed schools, colleges, and universities. Moreover, the government cancelled entrance tests, examinations, classes, and internships. It took students as well as the faculty by storm as adapting to the digitized education system was not easy. Change requires time; however, the pandemic caused the education sector in India to grow. Online education has proved to be a salvation for the students and teachers. They assigned work to students *via* the internet and delivered lectures through live video conferencing using applications like Zoom, Google meets Facebook, YouTube, and Skype. There are WhatsApp groups that help keep students, teachers, and even guardians connected and aware of the class schedules. Online learning is the best solution and is surely better than not getting to learn anything.

**Sethi and Saini (2020)** examined the opinions and challenges of school teachers on work from home with a sample size 50 school teachers by using web-base survey from pre-school to high school Socio-demographic profile and self-structured questionnaire were used to collect data. The study revealed at teachers had the positive opinion on work from home, although they consider WFH a moderately challenging job.

**Alexis L. Jones (2020)** conducted a study on “Teachers' emotion and identity work during a pandemic”. It is a conceptual analysis of the care involved on the part of teachers during the Covid-19 era and the relationship it has to teachers' identities. Using the authors' stories, it addressed how fatiguing care is on a normal day, not to mention what is involved during the Covid era. This care and the emotions involved, is closely tied to teachers' identities, calling into question how teachers conceptualize their teacher hood during a pandemic. The hope is that others will consider where they may have misunderstood teachers' work. It aim to raise awareness of the complexity of teaching and suggest how teacher education can address and support teachers' needs.

**KimkongHeng (2020)** conducted a study on “Online learning during covid-19: Key challenges and suggestions to enhance effectiveness”. The COVID-19 pandemic has wreaked havoc on every aspect of society. It has caused profound disruption to the education system as governments around the world have temporarily closed educational institutions to contain the spread of the coronavirus. Face-to-face classes have been canceled and moved online, bringing about the rise of online learning that has allowed learners to continue their education. The sudden transition from face-to-face to online learning has, however, posed numerous challenges for students, teachers, administrators, and education leaders. Drawing on previously published sources, this article first attempts to explain different terms used to describe online learning. It then discusses key challenges posed by the widespread adoption of online learning during the pandemic, followed by a discussion of suggestions made by different researchers to enhance the effectiveness of online learning. It concludes with a summary of key challenges and suggestions and brief recommendations for the broader adoption of online and blended learning in the post-COVID-19 world.

Working From Home Today: The widespread high-speed internet access, video conferencing, and collaboration apps, a laptop is all an employee needs to do their job and stay in touch with colleagues.

Working from home today typically begins when employees set up a workspace in their homes where they can do their jobs — including everything from preparing presentations and reports to conducting phone interviews and developing software.

Many jobs lend themselves well to a work-from-home arrangement. Virtual assistants, for instance, communicate with their employers via communication apps to complete many of the duties an onsite administrative assistant would.

Well-trained customer service representatives were some of the original work-from-home employees. Now many companies/organisations/institutions use a browser-based interface that enables home-based customer service representatives to answer calls and troubleshoot problems via live chat.

Technology is rapidly expanding the [jobs that can now be done from home](#). Lawyers and paralegals have access to online databases like Westlaw to look up cases, as well as electronic case management systems, for example.

Home offices vary. Employees who primarily work from home typically have a dedicated home office space in a spare room. Those who work from home occasionally often improvise, using whatever desk or table is available. They might also set up on their couch and use a coffee table, or create a standing desk.

**Di Pietro (2020)** conducted a study on “The likely impact on covid-19 on education: Reflections based on the existing literature and recent international datasets”. In order to reduce the spread of COVID-19, most countries around the world have decided to temporarily close educational institutions. However, learning has not stopped but is now fully taking place online as schools and universities provide remote schooling. Using existing literature and evidence from recent international data (Eurostat, PISA, ICILS, PIRLS, TALIS), this report attempts to gain a better understanding of how the COVID-19 crisis may affect students’ learning. It looks at the different direct and indirect ways through which the virus, and the measures adopted to contain it, may impact children’s achievement. ‘Conservative’ estimates for a few selected EU

countries consistently indicate that, on average, students will suffer a learning loss. It is also suggested that COVID-19 will not affect students equally, will influence negatively both cognitive and non-cognitive skills acquisition, and may have important long-term consequences in addition to the short-term ones.

**GurleenKaurSethi (2020)** “COVID-19: Opinions and Challenges of School Teachers on work from Home”. Mean opinion score was  $53.86 \pm 6.97$  which falls in the category of positive opinion. It means, overall, the subjects had a positive opinion regarding work from home. Mean score of challenges was  $5.30 \pm 1.741$ , which falls in the category of moderate challenges. It depicts that overall subjects considered work from home during COVID-19 a moderately challenging job. It concluded that, teachers had positive opinion on work from home although, they consider work from home a moderately challenging job. Thus, with the assistance of school authorities work from home can become a highly satisfying job for the teachers.

#### **Research Method:**

The main focus of the study was to study on “work from home: scenarios exhausting or draining during on-line teaching”

#### **Research Findings and Discussion:**

**Areas includes are:** Covering classes for absent students, Adjusting to new pedagogical Practices, Time spent on computer or digital devices, Meeting personal and professional expectations

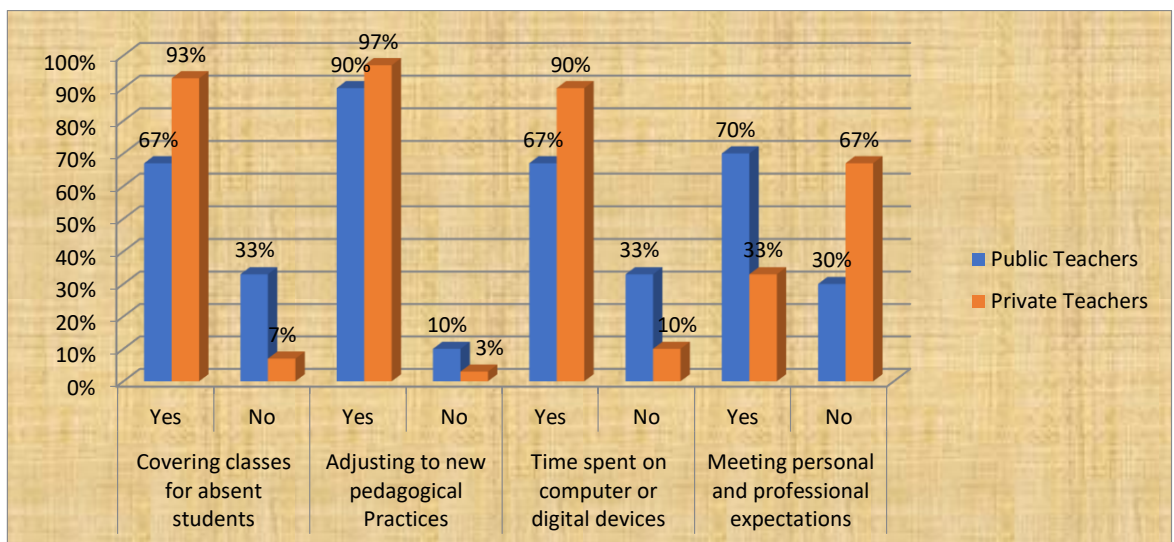
#### **Scenarios exhausting or draining during on-line teaching**

S.no	Area	Category	Public Teachers (n=30)		Private Teachers (n=30)		Total (n=60)	
			F	%	F	%	F	%
1.	Covering classes for absent students	Yes	20	67	28	93	48	80
		No	10	33	2	7	12	20

2.	Adjusting to new pedagogical Practices	Yes	27	90	29	97	56	93
		No	3	10	1	3	4	7
3.	Time spent on computer or digital devices	Yes	20	67	27	90	47	78
		No	10	33	3	10	13	22
4.	Meeting personal and professional expectations	Yes	21	70	10	33	31	52
		No	9	30	20	67	29	48

The above table represents the scenarios exhausting or draining during on-line teaching.

Private teachers scored 93 percent on covering classes for absent students whereas public teachers scored 67 percent in this area. Public teachers scored 90 percent on adjusting to new pedagogical practices whereas private teachers scored 97 percent in this area. Private teachers scored 90 percent on time spending on computer or digital devices whereas public teachers scored 67 percent in this area. Public teachers scored 70 percent on meeting personal and professional expectations whereas private teachers scored 33 percent in this area.



## Conclusion:

The data collected with respect to understand the study on “work from home: scenarios exhausting or draining during on-line teaching”. Working from home is **a lot more comfortable for lots of people**. Employees can save a great deal of time and money since they do not have to travel so often, which means people will have more time for work and for themselves, too. Less travelling will also help reduce traffic jam and pollutants to the environment. Private teachers scored 93 percent on covering classes for absent students whereas public teachers scored 67 percent in this area. Public teachers scored 90 percent on adjusting to new pedagogical practices whereas private teachers scored 97 percent in this area. Private teachers scored 90 percent on time spending on computer or digital devices whereas public teachers scored 67 percent in this area. Public teachers scored 70 percent on meeting personal and professional expectations whereas private teachers scored 33 percent in this area.

Working from home has become more common in recent years as technology has improved and more employers recognize the moral value of trusting employees. Employees treasure the flexibility and work-life balance.

A [Future of Work](#) survey of managers found that 78 percent ranked telecommuting and flexible schedules as two of the most valuable benefits for retaining employees. More than [half of the employers](#) provide their employees with the necessary devices for working remotely, while 36 percent facilitate working from home by using cloud-based file management tools.

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## **A STUDY ON THE INVOLVEMENT OF MOOCS IN THE TEACHING LEARNING PROCESS**

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### **Abstract:**

The MOOCs is the century of technological transformations representing a renewal in terms of platforms and educational methodologies through a computer. The current social requirements demand an education that adapts to the needs of people in terms of availability, time, and even lifestyle. These arise as a response to the digital vortex as a training resource in which a series of tools that promote their empowerment is implicit. The objective of this study is to carry out a bibliographic review of the last five years to establish the central interference of the MOOCs, their perspectives, and implications in the process of formation and knowledge. he MOOCs come to the digital sphere as an educational proposal that revolutionizes the traditional models of teaching, to create a learning model based on technology and the resources that come from it.

**Keywords:** Awareness, Higher Institutions, Massive Open Online Courses (MOOCs), Online Learning, Technology

### **INTRODUCTION OF THE STUDY**

A MOOC – massive open online course – is a program of learning offered by a university, open via the internet to users worldwide, free of charge. MOOCs are often based on part of an existing degree course, giving students an opportunity to ‘sample’ the experience of studying at prestigious institutions like MIT. Teaching materials may include videos, set reading, problems to solve and student forums.

MOOC has become an important tool for some teachers to gain professional development after getting their degrees. MOOC has become an effective solution to provide

high quality teacher professional development at a low cost. Second, MOOC enables teachers to learn according to their individual needs. While MOOCs are still usually intended for students *not* enrolled at the university in question, there is also a move towards universities providing free online courses for their on-campus students. In the US in particular, there's been speculation that universities with oversubscribed courses will offer online alternatives, so students unable to fit into the classroom can still complete the necessary modules to get their degree credits.

The 21st century is characterized by the infinity of Web resources available to strengthen content in countless areas of knowledge, positioning the Massive Open Online Course, as a paradigm shift in pedagogy, educational methods or evaluation available in this new era. In this context, only a literary review will allow the determination of the structure and contribution of these online courses, particularly because of their incidence as diversifiers of education at all levels; this review also becomes a support to deepen in their configuration and how these programs are distributed and segmented at worldwide level.

### **BENEFITS OF MOOCS (MASSIVE OPEN ONLINE COURSES)**

MOOC stands for massive open online courses. Traditional MOOCs are free online university courses offered by colleges all over the world that are normally not eligible for credit. Their enrollment can run upwards of 100,000+ students and anyone around the world can register. After registering, students will typically work at their own pace to watch informative lectures and lessons, complete assignments, and take exams. MOOCs offer many benefits well worth the time spent learning. Here are 11 advantages and benefits of MOOCs.

#### ***1. Offer a variety of subjects***

College schedules are tight, so you might not be able to take every course that you want to. Your school may not even offer a subject that you're interested in. This is where MOOCs can help. Search on one of the MOOC providers' websites to find interesting classes. The subjects range from yoga to personal finance to engineering to IT to English composition, etc. In some instances, you can pay a fee to receive college credit for your hard work. Check with your school's transfer policy before paying.

#### ***2. Let you test out your major before committing***

In most cases, the major you choose heavily influences the college you attend and your future career path. High school students can complete a MOOC course in their prospective major to see if it's the right fit. This risk-free, money-free method will help you figure out what major to choose and ultimately save you money. Starting college knowing what you want to

study means that you won't waste time bouncing between majors and paying for useless classes.

### ***3. Familiarize you with college-level learning before enrolling***

Wondering if college learning is right for you? Taking a MOOC will help you understand what college classes are like before you're paying for them. The tests you take and assignments you complete offer insight into what the next four years might look like. If possible, try out a course at a college you're considering attending.

### ***4. Prepare you academically for college***

Feeling unprepared for college? You're not alone. In 2010, nearly 70% of high school seniors accepted to college were unprepared. Many MOOCs are designed to help combat this unpreparedness. Some MOOCs for high school students include entry-level math, first-year composition, and pre-calculus. Talk to your guidance counselor or teachers to see what areas they recommend you focus on.

### ***5. Learn from peers around the world***

Anyone from any country with internet access can take a MOOC class. Participants can communicate with one another through discussion threads and social networking. Just like in a real classroom, you'll learn from your peers and possibly broaden your worldview too.

### ***6. They're open to everyone***

Another one of the advantages of MOOCs is that there are no prerequisites for MOOC learning. You can sign up for any class no matter your background or age. Just be prepared to put in the effort.

### ***7. MOOCs are available in different languages***

Your course options aren't restricted just based on where you live. Enjoy courses taught in foreign countries without hesitation thanks to subtitles. Subtitles also make these courses friendly to individuals who are deaf or hard of hearing.

### ***8. Learn a language for FREE***

Rosetta Stone is expensive, and in-person language classes might move too quickly for you. MOOCs are a free way to learn a new language at your own pace. Easily return to lectures as needed and take your time learning instead of cramming for exams.

### ***9. Offer FREE AP exam preparation and courses***

Harvard University and MIT's edX MOOC platform offers FREE AP exam preparation and courses. You can learn confusing material at your own pace outside of your high school classroom. These supplementary courses will help you achieve high AP exam scores that in turn will give you college credit.

### ***10. Help your college and scholarship applications stand out***

Anything you can do in high school to show future college admissions counselors that you're serious about learning will help your application. Knowledge gained from MOOCs will also help in department or interest-specific scholarship applications and interviews. Plus, taking these massive open online courses shows initiative and intellectual curiosity. These are both characteristics of a successful student.

### ***11. Boost your job applications and career prospects***

Employers look for several soft skills in their future employees. Some degree programs help students develop these skills better than others do. Free online college classes like MOOCs help bridge the gap between college graduate and employee. EdX provides several free "soft skills" courses that cover topics from teamwork to public speaking. This MOOC platform also offers paid professional programs that are certified. Their Soft Skills professional certificate program by Rochester Institute of Technology includes 6 courses and costs \$49 per course. You can also opt to take their professional courses free without the certification. Completing MOOCs in a niche area can also help you secure a job. For example, say you're an English major applying to work as a copywriter for a web design firm. Taking a MOOC on basic web design or HTML coding will set you apart from other candidates. Students applying to grad school can also take advantage of MOOCs to help their university applications stand out

## **CHALLENGES OF MOOCS**

Along with positive features, there are also some concerns around MOOCs. Creed-Dikeogu and Clark state that:

- They are not an educational panacea
- They are not yet evolved enough to provide thorough peer assessment methodology, robust business revenue models, stabilized retention rates, successful pedagogical design, or resolution for cheating and plagiarism.





But due to limited resources (and sometimes a language barrier), we cannot index every single one. If you're looking for MOOCs from around the world (many in languages other than English), this list is our best attempt to catalog all different MOOC platforms that are out there. The list has been adapted with permission from *Mindshift: Break Through Obstacles to Learning and Discover Your Hidden Potential* by Barbara Oakley (Tarcher-Perigee, April 2017). We first published this list in 2017. It was last updated and expanded in 2022.

***MOOC Platforms from North America & United States***

- Coursera / United States
- edX / United States
- Udacity / United States
- Canvas Network/ United States
- Kadenze / United States
- Stanford Lagunita / United States
- Complexity Explorer / United States
- MéxicoX / Mexico

***MOOC Platforms from Europe & United Kingdom***

- FutureLearn / United Kingdom
- France Université Numérique (FUN) / France
- Miriadax / Spain
- EduOpen / Italy
- Federica Web Learning / Italy
- European Multiple MOOC Aggregator (EMMA) / Europe
- OpenHPI / Germany
- MOOC.fi / Finland
- Prometheus / Ukraine
- Open Education (openedu.ru) / Russia

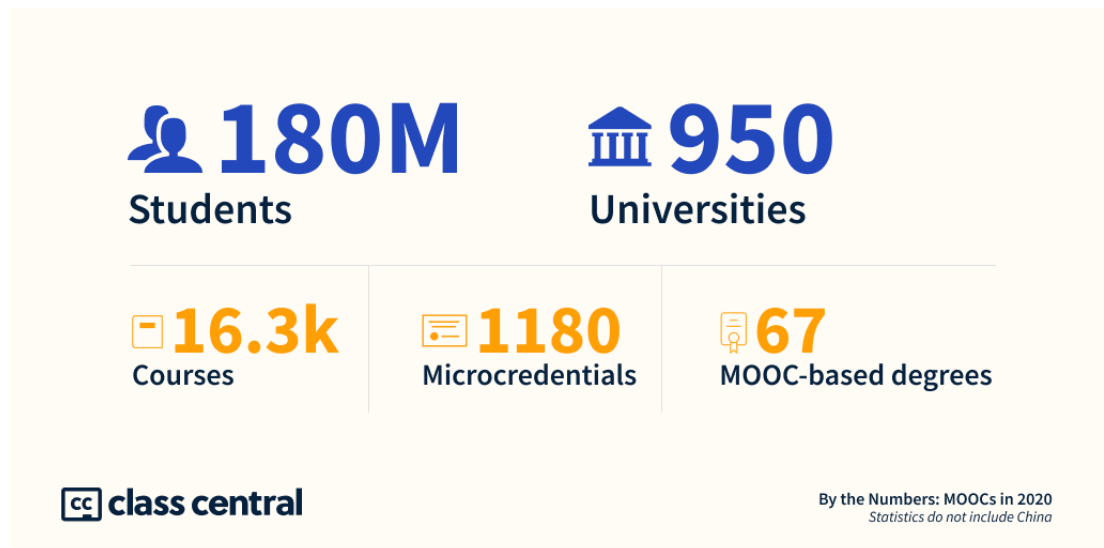
***MOOC Platforms from Asia (excluding Chinese MOOC Platforms)***

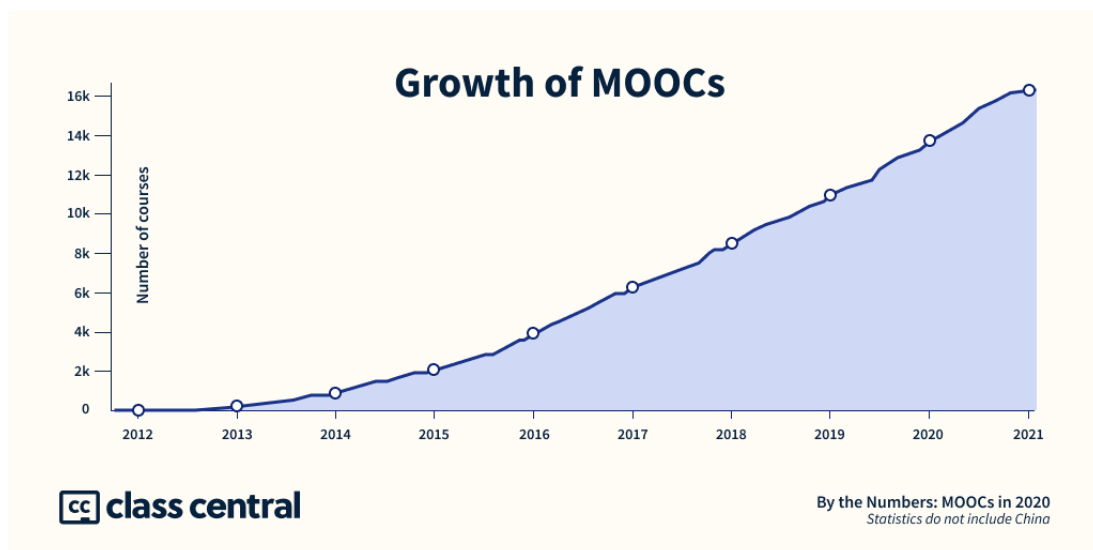
- SWAYAM / India
- NPTEL / India
- JMOOC / Japan
- gacco / Japan
- Fisdome / Japan
- OpenLearning / Japan

- K-MOOC / Korea
- ThaiMOOC / Thailand
- IndonesiaX / Indonesia
- Edraak (Arabic) / Jordan
- Campus-II / Israel

### *Chinese Language MOOC Platforms*

- XuetangX / China
- Chinese University MOOC / China
- Zhihuishu / China
- CNMOOC / China
- Xue Yin Online / China
- Open Education (openedu.tw) / Taiwan
- eWant — education you want / Taiwan
- A massive list of all Chinese language MOOC platforms





At the end of 2020, 16.3K MOOCs will be announced or launched by around 950 universities worldwide. In 2020 alone, around 2.8K courses were added.

## Learners

In the years 2020, MOOC providers' growth had stagnated: they were gaining a similar number of learners every year. But in 2020, providers gained over 60 million new learners combined. Half of these were just for Coursera, who gained almost as many users in a year than edX, its next closest competitor, gained since its inception.

## Online Degrees

	2017	2018	2019	2020
Coursera	4	11	16	25
edX	1	9	10	13
FutureLearn	4	18	23	28

In the year 2018 was a blockbuster year for MOOC-based degrees: 30 degrees were added, leading me to call it the year of MOOC-based degrees. But in 2019, we saw a big slowdown: only 11 degrees were announced. This trend has seen an uptick in 2020: 19 online degrees have been announced, and edX removed its marketing master's from Curtin University. FutureLearn also removed a degree: the Cyber Security master's from Deakin University. In total, there are now 67 MOOC-based degrees. This includes Georgia Tech's online master's degree in computer science (OMSCS), which used to be offered on Udacity, but went independent in 2020.

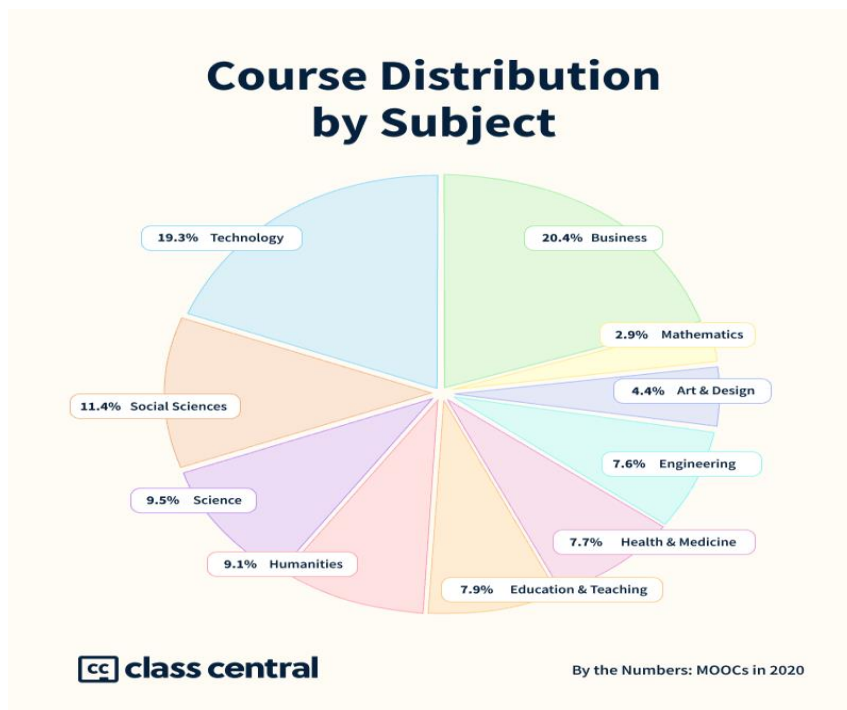
You can find a comprehensive list of MOOC-based master's degrees [here](#).

#### Micro credentials

Type	Provider	2018	2019	2020
Specializations	Coursera	310	400	569
Professional Certificate	Coursera	0	13	26
MasterTrack	Coursera	3	6	18
Professional Certificate	edX	89	123	176
MicroMasters	edX	51	56	67
XSeries	edX	29	40	40
Professional Education	edX	62	73	94
MicroBachelors	edX	0	0	8
Nanodegrees	Udacity	35	40	73

Programs	FutureLearn	23	32	36
Microcredentials	FutureLearn	0	0	32
Academic Certificates <sup>4</sup>	FutureLearn	14	17	19
Programs	Kadenze	19	20	20

In 2020, 360 new microcredentials were launched — 200 of them by Coursera alone. This represents a significant increase over 2019, when 170 microcredentials were launched. In total, there are now 1180 microcredentials of 13 different types.



## Conclusion:

The MOOCs are positioned as resources that contribute to online education and contribute to the field of knowledge in a free and open way, with innovation in pedagogical processes and in the curricular structure in different areas of knowledge. Traditional and linear education is mutating into an education that encompasses an infinite number of topics,

scenarios, structures and configurations to present students with multifunctional content, with sufficient capacity to adapt to different formats. In this sense, MOOCs require constant updating of knowledge by those who teach them, which can also represent a challenge and commitment to continuous improvement, even more so in a context that varies from minute to minute. It is evident that the MOOCs with the greatest impact correspond to the United States and are developed within the Coursera platform, positioned as the leader in this area, in addition to reflecting a permanent collaboration with the best universities in the world and their teachers. Although there are approximately ten digital platforms where these courses operate, Coursera presents the greatest variety of topics, as well as an acceptance of the public, evidenced in the number of individuals registered

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**Efficiency and effectiveness of Human Resources Management practices in private Arts and  
Science colleges in Chennai**

**- Theboral.P**

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**Abstract**

For any organisation, the most valuable asset in terms of skills and capabilities is the human resource. Today's organization believe it is crucial to manage their human resources so that the employees increase the organization's productivity. Institutions of higher learning prepare highly skilled specialists. By disseminating knowledge, universities support the growth of the institution, students, staff, and the broader development of the country. Over the past few years, the education industry in India has experienced tremendous growth. Educational institutions need to develop their staff, so it's critical for them to manage their human resources well. Therefore, the goal of the current study is to examine the human resource management strategies used by higher education institutions and the efficiency and effectiveness of such policies in the growth of faculties in higher educational institutors.

**Introduction**

India's higher education system is one of the largest systems and one of a kind in the world that has evolved in a spectacular way, especially in the post-independence era. Higher Educational Institutions are institutions of higher learning, such as universities, institutions deemed to be universities, colleges, institutions of national importance designated as such by an Act of



Parliament, or constituent units of such institutions, that provide higher education beyond the completion of twelve years of formal education and that award degrees or diplomas. It also includes shorter term education and training courses (polytechnics, junior colleges, and various forms of technical specialty schools) that are 2-3 years in length, and even correspondence courses that make use of information technology and are targeted at a broad population of students.

The Ministry of Education (GoI)/ Department of Education mentioned in its report that the number of universities in India has increased 34 times from 20 in 1950 to 677 in 2014. The number of colleges has also registered manifold increase of 74 times with just 500 in 1950 growing to 37,204, as on 31st March, 2013. Totally the sector boasts of 45 Central Universities of which 40 are under the purview of Ministry of Education, 318 State Universities, 185 State Private universities, 129 Deemed to be Universities, 51 Institutions of National Importance (established under Acts of Parliament) under MoE (IITs - 16, NITs – 30 and IISERs – 5) and four Institutions (established under various State legislations). Currently, the main categories of University/University-level Institutions are: - Central Universities, State Universities, Deemed-to-be Universities and University-level institutions.

The four main functions of Higher education in terms of 1. Academic leadership, 2. Professional development, 3. Technological training and development and 4. General higher education demands higher educational institutions to be competitive in the field of education. This requires the institutions to changing curriculum according to the demand of the industry, recruiting faculty, research and developmental activities, updating and up gradation of technology to assist teaching methodologies etc.

However, the system is currently dealing with a number of pressing problems, such as funding, management, access, equity, and relevance; reorienting programmes to place more of an emphasis on health awareness; values, ethics, and quality of higher education; and evaluating institutions and accrediting them. These concerns are crucial for the nation because it is currently working to create a knowledge-based information society fit for the 21st century using higher education as a potent tool.

The idea of planning and administration have severely penetrated the way in which the educational institutions are functioning today. Managing Human resources in education field/Industry totally differs from corporate administration. Hence, HRM practices in educational setup are integral as it encompasses various Performance appraisal, Recruitment of faculties, HRM is gradually being accepted as the centre of any intuitions.

## **Review of Literature**

The implementation of technical and strategic HR practices has already been empirically tested; the outcomes indicate that most companies are successful when implementing technical HR practices, such as security and clearing companies. However, in the companies in which practices considered strategic (e.g. employee empowerment, managerial involvement and development) were effectively implemented, the impact on the organizational outcomes was significantly higher (Huselid *et al.*, 1997; Costa, Demo, & Paschoal, 2017).

The strategic human resource management (SHRM) emerged in the middle of the 1980s and is currently seen as a relevant research field and practice in business administration (Kaufman, 2015). Its academic relevance has been gaining a growing international emphasis, considering the importance of the strategic performance of human resource management (HRM) (Jackson, Schuler, & Jiang, 2014).

Yousaf, Sanders, and Yustantio (2018) advise practitioners to understand which HR practices influence employees in the manner intended by management. In the same vein, several studies provide supplementary advice such as conducting regular data collection on employees' HR perceptions (Cooke, Cooper, Bartram, Wang, & Mei, 2019; Fletcher, Alfes, & Robinson, 2018; Liao et al., 2009).

Employee perceptions of the '*how*' of HR practices involve employee views of how HR practices are designed and implemented (Delmotte, De Winne, & Sels, 2012). This research stream is distinctive from the studies of the '*what*' of HR practices in the sense that the focus is about the process through which HR messages are delivered to organizational members. A central assumption of research on the '*how*' of HR practices is that even a well-intended HR system may not produce its best possible outcomes if employees fail to make sense of it in a coherent, consistent and unified way.

Human resource management there is more like personnel management from the Fordism era than HRM in the new economy, as demonstrated by various studies. However, new approaches to the economy are proposed in place of the limited concept of economic growth, such as organisational, social, psychological, etc., in which a person is taken into account in the entirety of his qualitative characteristics (Maikenova & Aldabaeva, 2016).

A report released by Thomson Reuters (2008), after surveying 89 college and university administrators worldwide, shows that the most common measures of performance tracked by institutions of higher education are: grant funding, faculty salaries, research expenditures, patents,

research output, graduation rates, private gifts, enrolment growth, faculty reputation, profitability, revenues, and rankings

According to Kleiman (2000), Performance evaluation, is the assessment of an employee's production. Therefore, an effective assessment process can generate leadership in company by improving staff work productivity in two ways: by directing employee behaviour in the direction of corporate goals.

And monitoring the behaviour to make sure the goals are met. By emphasising employee progress toward fulfilling their portion of the strategy, a top-notch evaluation method supports an establishment's corporate strategy. Effectively, an evaluation process enables employees to understand what is expected of them and, as a result, direct their behaviour in the appropriate direction. Assessments of compensation and job payments are used to determine the relative worth of an assignment.

Balatbat (2010) claims that humanity has progressed. Its financial, commercial, and educational sectors are all changing at an accelerated rate. Every institutional change and accomplishment rely on its constituents. As a result, managing the workforce becomes crucial as enterprises face new challenges. The staff administration has been forced to reconsider its goals in order to make them more sensitive to the ongoing transformation as a result of the advent of the new global economic order and current technical know-how.

Chang and Chen (2002) conducted a thorough investigation to assess the relationships between human resource management methods and the success of Taiwanese high-tech companies in the Hsinchu science-based industrial park. The information gathered from 197 participating firms showed that HRM activities like teamwork, training and development, benefits, and performance appraisal have a big impact on employee productivity.

According to "Human Capital Theory," investing in people has economic benefits for both individuals and society as a whole (Zula and Chermack, 2007). The emergence of for-profit higher education institutions in recent years, along with globalisation and technology, has increased competition. Institutions should demand responsiveness from the capabilities of society if they are to survive and prosper in this competitive environment. In higher educational institutions, the opportunity to choose, mentor, and improve people's abilities must be taken seriously. It is necessary to design strategies for selecting the right individuals, enhancing capabilities, providing instruction, evaluating performance, and creating a comfortable operational environment. Furthermore, exclusive tertiary institutions need to be able to identify the traits and practises that fit well with their traditions, aspirations, and goals (Balatbat, 2010).

Mishra (2007) argued that although the definition of excellence, especially in advanced academia, is challenging, the expression has some thematic suggestions about which the entire theory revolves: quality as absolute (is agreed and thought of as the uppermost achievable value), quality as relative (is portrayed in comparative expressions), quality as a process (is the result of schemes and routine needs), and quality as culture (identifies the significance of institutional ou He noted that although former quality plans have their own specific sectors, academic institutions are mostly focused on quality as a tradition. A different perspective describes quality as a notion in a different way by different interest groups.

## **Methodology**

### **Objectives**

- To examine the various HRM practices in higher educational institutions in private arts and science colleges in Chennai.
- To analyze the effectiveness and efficiency of training and development with performance appraisal practices in higher educational institutions.

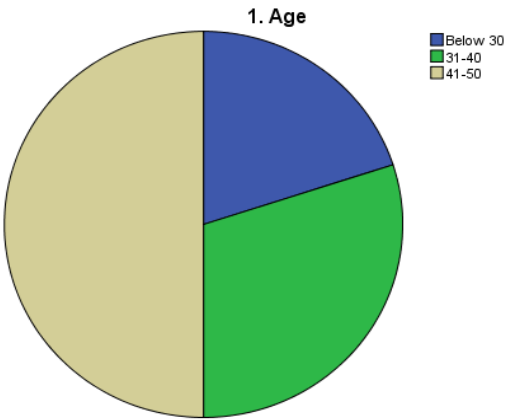
### **Research Design and Data collection**

This quantitative study used a descriptive research design. Faculties of various private college in Chennai, both male and female employees were included. Based on the literature review, and with particular emphasis on the several research studies, the various human resource management practices in higher education were conceptualized. These items were adapted and incorporated in the schedule which was used to collect the data. Faculties of various private college in Chennai, both male and female employees were included. The self-administered survey was employed as a way to gather information. 60 subjects made up the study's sample size. After the data were collected, it was then compiled into usable form to which both qualitative and quantitative techniques were applied. The questionnaire, constructed by researcher was mailed to faculties in various private colleges in Chennai. The questionnaire was divided into five sections: Socio-demographic questions, Training and development, Employees participation, Performance appraisal and compensation. Each section contained from four to five elements for the respondents to rate as to the importance practiced by their institution. Responses to the scale were measured on a five-point Likert-type scale ranged as follows: 5 strongly agree, 4 agree, 3 neutral 2 disagree, and 1 strongly disagree.

Results

Frequency table for age of the respondents

Age of the Respondents				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 30	12	20.0	20.0
	31-40	18	30.0	50.0
	41-50	30	50.0	100.0
	Total	60	100.0	



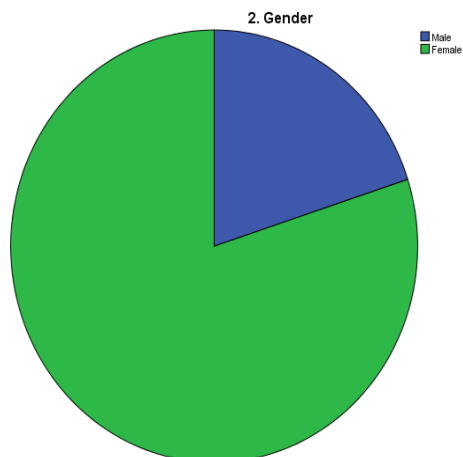
Interpretation

This table reflects the proportion of the respondents at different stages in life. Most respondents fall within 41 years - 50 years of age, at 50% of all respondents. While, least respondents fall within below 30 years of age , at 20% of all respondents. 30% of all respondents are of 31 years – 40 years of age.

Frequency table for gender of the respondents

## Gender of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	12	20.0	20.0	20.0
	Female	48	80.0	80.0	100.0
	Total	60	100.0	100.0	

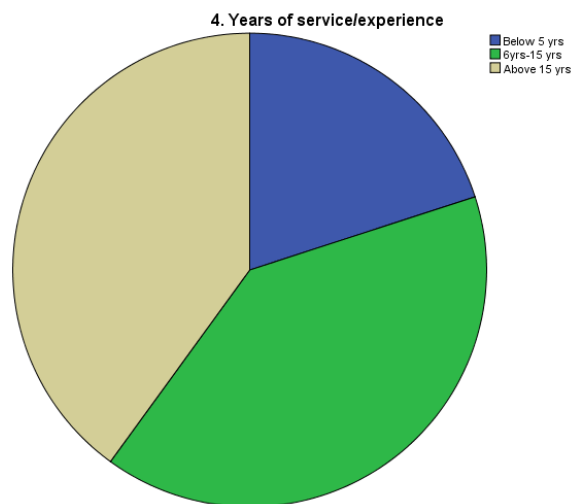


## Interpretation

This table reflects the proportion of the respondents who identify as different genders. Most respondents identify as Female, at 80% of all respondents. While, no respondents identify as some other gender not listed here as a choice. 20% of all respondents identify as Male.

### Frequency table for years of service/experience of the respondents

Years of service/experience of the Respondents				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Below 5 yrs	12	20.0	20.0	20.0
6yrs-15 yrs	24	40.0	40.0	60.0
Above 15 yrs	24	40.0	40.0	100.0
Total	60	100.0	100.0	



### Interpretation

This table reflects most respondents fall within 6 years - 15 years and above 15 years of service/experience, at 40% of all respondents. While, least respondents fall within below 5 years of service/experience, at 20% of all respondents.

- Null Hypothesis ( $H_0$ ) – There is no significant association between gender and employee participation
- Alternate Hypothesis ( $H_1$ ) – There is significant association between gender and employee participation

**Table showing chi-square result for association between gender and employee participation**

### Gender

	Observed N	Expected N	Residual
Male	13	30.0	-17.0
Female	47	30.0	17.0
Total	60		

### Employee Participation

	Observed N	Expected N	Residual
N	12	20.0	-8.0
	41	20.0	21.0
SA	7	20.0	-13.0
Total	60		

### Test Statistics

	Gender	Employee Participation
Chi-Square	19.267 <sup>a</sup>	33.700 <sup>b</sup>
df	1	2
Asymp. Sig.	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.0.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.0.

### Interpretation

The above table shows that the significance level value (p) is less than 0.05 and hence, the null hypothesis ( $H_0$ ) is rejected, and the alternative hypothesis ( $H_1$ ) is accepted and thus, there is a significant association between gender employee participation.

- Null Hypothesis ( $H_0$ ) – There is no significant association between gender and employee performance.
- Alternate Hypothesis ( $H_1$ ) – There is significant association between gender and employee performance.



**Table showing chi-square result for association between gender and employee performance**

Gender			
	Observed N	Expected N	Residual
Male	13	30.0	-17.0
Female	47	30.0	17.0
Total	60		

Employee Performance			
	Observed N	Expected N	Residual
SD	12	20.0	-8.0
D	47	20.0	27.0
A	1	20.0	-19.0
Total	60		

Test Statistics		
	GENDER	Employee Performance
Chi-Square	19.267 <sup>a</sup>	57.700 <sup>b</sup>
df	1	2
Asymp. Sig.	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.0.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.0.

### Interpretation

The above table shows that the significance level value (p) is less than 0.05 and hence, the null hypothesis ( $H_0$ ) is rejected, and the alternative hypothesis ( $H_1$ ) is accepted and thus, there is a significant association between gender employee performances.

**Null hypothesis ( $H_0$ ): There is no significant relationship between Training and development and**

## Performance Appraisal

**Alternate hypothesis (H<sub>1</sub>) : There is a significant relationship between Training and development and Performance Appraisal**

### Correlations

		Training and development	Performance appraisal
Training and development	Pearson Correlation	1	-.107
	Sig. (2-tailed)		.414
	N	60	60
Performance appraisal	Pearson Correlation	-.107	1
	Sig. (2-tailed)	.414	
	N	60	60

### Descriptive Statistics

	Mean	Std. Deviation	N
Training and development	4.4833	.50394	60
Performance appraisal	3.1167	1.05913	60

### Interpretation

Above table shows that Pearson correlation = -.107 and  $p = 0.414$  ( $p > 0.05$ ). Therefore Alternative hypothesis (H<sub>1</sub>) is rejected and Null hypothesis (H<sub>0</sub>) is accepted and thus, there is no significant relationship between Training and development and Performance Appraisal.

### Discussion

This study covered four HRM practises: staff training and development, salary, performance rating and awards, and employee participation. Many institutions continue to see a discrepancy between the intended and actual implementation of their HR strategies. Staff across private higher educational institutions perceived that the all HRM dimensions were often applied. Therefore, it is concluded that there exists fair people management across private higher educational institutions. There is also

statistical evidence that staff designation, and the perceived HRM practices have high significant relationship. The fact that this study was limited to the private higher educational institutions future study can be conducted that concerns a bigger number of HEIs, involves public ones, and deals with more HRM dimensions and practices. This is to explore other possible results that may reveal using other set of demographic variables and HRM dimensions.

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# **A Study on the Relationship between Personality Traits and Contextual Performance: A Study**

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## **Abstract:**

Although the way we work today is very different from what we worked on twenty years ago, effective management of employee performance is still a key to organizational success. Our rewards and recognition systems still focus primarily on task completion and goal achievement. But there is another side to employee performance that is equally important but often unrecognized and unrewarded. Contextual performance refers to activities that do not task or goal-specific but that make individuals, teams, and organizations more effective and successful. Contextual performance includes cooperating and helping others, voluntarily performing extra-role activities, persevering with enthusiasm and extra determination to complete assignments successfully, defending the organization's goals, and adhering to organizational policies even when this is inconvenient. The research focuses on the relationships between personality traits and contextual performance. The dimensions of Personality traits are based on the Big Five personality traits: Openness, Agreeableness, Conscientiousness, and Extroversion being positive traits and Neuroticism being the sole negative trait. In this research, the effects of Personality traits on contextual performance are to be analyzed.

**Keywords: Performance, Personality, Pattern, Behaviour**

## **I Introduction:**

Contextual performance refers to activities that do not task or goal-specific but that make individuals, teams, and organizations more effective and successful. Contextual performance includes cooperating and helping others, voluntarily performing extra-role activities, persevering with enthusiasm and extra determination to complete assignments successfully, defending the organization's goals, and adhering to organizational policies even when this is inconvenient. These non-traditional contextual performance behaviors have become even more important with the advent of virtual teams and project-based work. Indeed, the notion of teamwork itself incorporates contextual behaviors.

## **Personality**

Personality refers to individual differences in characteristic patterns of thinking, feeling, and behaving. The study of personality focuses on two broad areas: One is understanding individual differences in particular personality characteristics, such as sociability or irritability. The other is understanding how the various parts of a person come together as a whole.

Most theories focus on motivation and psychological interactions with one's environment. Trait-based personality theories, such as those defined by Raymond Cattell, define personality as the traits that predict a person's behavior. On the other hand, more behaviorally-based approaches define personality through learning and habits. Nevertheless, most theories view personality as relatively stable. The study of the psychology of personality, called personality psychology, attempts to explain the tendencies that underlie differences in behavior. Many approaches have been taken on to study personality, including

biological, cognitive, learning, and trait-based theories, as well as psychodynamic, and humanistic approaches.

### **Big Five personality traits**

**Big Five personality traits**, also known as the **five-factor model (FFM)** and the **OCEAN model**, are a taxonomy, or grouping, for personality traits. When factor analysis (a statistical technique) is applied to personality survey data, some words used to describe aspects of personality are often applied to the same person. For example, someone described as conscientious is more likely to be described as "always prepared" rather than "messy". This theory is based therefore on the association between words but not on neuropsychological experiments. This theory uses descriptors of common language and therefore suggests five broad dimensions commonly used to describe the human personality and psyche.

The five factors are:

- Openness to experience (inventive/curious vs. consistent/cautious)
- Conscientiousness (efficient/organized vs. easy-going/careless)
- Extroversion (outgoing/energetic vs. solitary/reserved)
- Agreeableness (friendly/compassionate vs. challenging/detached)
- Neuroticism (sensitive/nervous vs. secure/confident)

The five factors are represented by the acronym **OCEAN** or **CANOE**. Beneath each proposed global factor, there are several correlated and more specific primary factors. For example, extraversion is said to include such related qualities as gregariousness, assertiveness, excitement seeking, warmth, activity, and positive emotions.

### **Contextual Performance**

**Contextual performance** is defined as activities that contribute to the social and psychological core of the organization and is beginning to be viewed as equally important to task performance. Examples of contextual performance include volunteering for additional work, following organizational rules and procedures even when personally inconvenient, assisting and cooperating with coworkers, and various other discretionary behaviors. By strengthening the viability of social networks, these activities are posited to enhance the psychological climate in which the technical core is nested.

Contextual performance is related to overall employee job performance. A significant portion of supervisor ratings can be accounted for by not just task performance, but contextual performance as well. Other organizational outcomes such as turnover (employment) are related to contextual performance. Research shows that contextual performance is a significant predictor of turnover over and above task performance. Employees displaying more contextual performance behaviors were less likely to turn over than those engaging in less contextual performance behaviors. While also touted as a predictor of contextual performance, organizational commitment is an outcome of contextual performance. The facet of interpersonal facilitation significantly predicts organizational commitment. Research generally supports that contextual performance does indeed relate to overall organization performance as measured by quality, quantity, financial measures, and customer service measures. Contextual performance is a fundamental part of the employee performance criteria, then contextual performance should be considered in all aspects of the employment process, this includes selection, performance appraisal, and rewards. Selection procedures should take into account the predictors of both task and contextual performance.

### **II Literature Review/ Conceptual Development**

It is believed that the Big Five traits are predictors of future performance outcomes. Job outcome measures include job and training proficiency and personnel data. However, research demonstrating such prediction has been criticized, in part because of the low correlation coefficients characterizing the relationship between personality and job performance. Extending Mischel's (1977) conceptualization of strong and weak situations, it was hypothesized that personality and contextual performance behavior would be most strongly correlated when there were only weak cues, and less correlated when there were strong cues. FFM is a useful taxonomy of personality. This evidence includes factor analytic evidence (Norman, 1963), genetic influences on the five factors (Bouchard, 1997), stability of the FFM across the lifespan (Costa & McCrae, 1998), and the replicability of the FFM across different theoretical frameworks, assessment approaches, in different cultures, and different languages (e.g., Digman & Takemoto-Chock, 1981; Digman & Shmelyov, 1996; Somer & Goldberg, 1999). Given that the dimension of conscientiousness has been linked to motivational processes and outcomes, it is reasonable to expect that managers who score high on this dimension are more likely than their low-conscientiousness

counterparts to engage in goal-directed behavior and to perform tasks carefully and enthusiastically - Organ & Ryan (1995), Scotter Motowidlo (1996) & Hatrup (1998). In their meta-analytic review, Organ and Ryan (1995) found that Conscientiousness and Agreeableness were the two strongest predictors of OCB. Some studies reviewed for the meta-analysis found a relation between the Big Five factor of neuroticism and OCB but taken together, the results were not significant. Dr. Kevin Murphy, Professor of Psychology at Pennsylvania State University and Editor of the Journal of Applied Psychology (1996–2002) state: The problem with personality tests is that the validity of personality measures as predictors of job performance is often disappointingly low. The argument for using personality tests to predict performance does not strike me as convincing in the first place. Such criticisms were put forward by Walter Mischel, whose publication caused a two-decade-long crisis in personality psychometrics. However, later work demonstrated that the correlations obtained by psychometric personality researchers were very respectable by comparative standards and that the economic value of even incremental increases in prediction accuracy was exceptionally large, given the vast difference in performance by those who occupy complex job positions.

Experience. Furthermore, they found that when these personality constructs were aligned with the corresponding performance dimensions, higher mean validities were realized than in previous meta-analyses (e.g., Barrick & Mount, 1991; Hurtz & Donovan, 2000). There have been studies that link national innovation to openness to experience and conscientiousness. Those who express these traits have shown leadership and beneficial ideas toward the country of origin. Managers who score high on the personality dimensions of extroversion and agreeableness are likely better suited for the social and interpersonal demands of the contextual activities (e.g., fostering positive work relationships, interactions with subordinates, public relations) than are managers who score lower on these socially relevant dimensions. Moreover, we see evidence in the literature supporting relations between contextual performance and the dimensions of extroversion and agreeableness Scotter & Motowidlo (1996). [Borman & Motowidlo \(1997\)](#) states that personality successfully predicts contextual performance, and provides an alternative explanation for recent meta-analytic findings that personality correlates moderately with overall performance. Personality may be predicting the contextual component of overall performance. Results from studies using the Hogan Personality Inventory confirm that correlations between personality and contextual criteria are higher than correlations between personality and overall performance.

Mischel argued that personality traits are more likely to be expressed as behavior. Accordingly, the relative strength of one's job situation should moderate the amount of criterion variance explained by personality traits. Failure to account for situational effects is one explanation why, even when significant personality–performance correlations are found across job situations, personality traits only account for only a small proportion of criterion variance Pfeffer (1997) meta-analysis carried out by Chiaburu, Oh, Berry, Li, and Gardner (2011) shows that personality influences both types of performance, but through different traits. Conscientiousness ( $p_v = .22$ ), Openness to experience ( $p_v = .17$ ), and Agreeableness ( $p_v = .17$ ) influence contextual performance, while Conscientiousness ( $p_v = .16$ ) and Emotional Stability ( $p_v = .14$ ) influence task performance. The contextual performance and OCB research suggests that, across occupational groups, there is a relation between four of the Big Five personality factors and behaviors associated with contextual performance. However, the correlations are often modest and therefore open the door to speculation about potential moderators (Borman, Hanson, & Hedge, 1997).

Some businesses, organizations, and interviewers assess individuals based on the Big Five personality traits. Research has suggested that individuals who are considered leaders typically exhibit lower amounts of neurotic traits, maintain higher levels of openness (envisioning success), balanced levels of conscientiousness (well-organized), and balanced levels of extraversion (outgoing, but not excessive). Further studies have linked professional burnout to neuroticism, and extraversion to enduring positive work experience. Some research suggests that vocational outcomes are correlated to the Big Five personality traits. Conscientiousness predicts contextual performance in general. Conscientiousness is considered top-ranked in overall contextual performance. Research further categorized the Big 5 behaviors into 3 perspectives: task performance, organizational citizenship behavior, and counterproductive work behavior. Task performance is the set of activities that a worker is hired to complete, and results showed that Extraversion ranked second after Conscientiousness, with Emotional Stability tied with Agreeableness ranked third. For organizational citizenship behavior, relatively less tied to the specific task core but benefits an organization by contributing to its social and psychological environment, Agreeableness and Emotional Stability ranked second and third. Lastly,

Agreeableness is tied with Conscientiousness as the top-ranked for Counterproductive work behavior, which refers to intentional behavior that is counter to the legitimate interests of the organization or its members.

Occupational self-efficacy has also been shown to be positively correlated with conscientiousness and negatively correlated with neuroticism. Significant predictors of career-advancement goals are extraversion, conscientiousness, and agreeableness. Openness is positively related to proactivity at the individual and the organizational levels and is negatively related to team and organizational proficiency. These effects were found to be completely independent of one another. Agreeableness is negatively related to individual task proactivity. Conscientiousness is positively related to all forms of work role performance. Neuroticism is negatively related to all forms of work role performance.

Two theories have been integrated into an attempt to account for these differences in work role performance. Trait activation theory posits that within a person trait levels predict future behavior, that trait levels differ between people, and that work-related cues activate traits that lead to work. Relevant behaviorists that role senders provide cues to elicit desired behaviors. In this context, role senders (i.e.: supervisors, managers, et cetera) provide workers with cues for expected behaviors, which in turn activates personality traits and work-relevant behaviors. In essence, expectations of the role sender led to different behavioral outcomes depending on the trait levels of individual workers and because people differ in trait levels, responses to these cues will not be universal.

In recent years, contextual performance has emerged as an important aspect of overall job performance. Job performance is no longer considered to consist strictly of performance on a task. Rather, with an increasingly competitive job market, employees are expected to go above and beyond the requirements listed in their job descriptions. Therefore, when conducting performance appraisals, organizations may want to explicate that they take into account the facets of both contextual and task performance. Beaty, Jeanette, Cleveland & Murphy (2001) stated both a laboratory and field study investigated the extent to which the strength of behavioral cues in simulated and actual job performance situations moderate the relation between measures of broad personality dimensions and contextual performance behaviors. Beaty et al., 2001; de Kwaadsteniet et al., 2006; Snyder and Ickes, 1985) A considerable volume of basic theory and research shows that cognitive factors and personality traits exert strong influences on behavior in such weak situations

### **III Research Objectives and Question**

- To understand the relationship between Personality traits and contextual performance.
- To find the effect of personality traits on contextual performance.

**Research Questions:** The present report focuses on the relationships between personality traits and contextual performance. The dimensions of Personality traits are based on the Big Five personality traits: Openness, Agreeableness, Conscientiousness, and Extroversion being positive traits and Neuroticism being the sole negative trait. In this report, the effects of Personality traits on contextual performance are to be analyzed.

### **Research Design**

Research methodology is the specific procedures or techniques used to identify, select, process, and analyze information about a topic. In this study the population was residents of India, comprising of men and women of all age groups, educational status, socio-economic status, and residential areas who have some amount of experience working in an organization. The research used the Descriptive Research Design. Descriptive research, also known as statistical research, describes data and characteristics of the population or phenomenon being studied. The research used Convenience Sampling. In this method the sample units are chosen primarily based on the convenience to the researcher. The sample size 200 and measures the number of individual samples measured or observations used in a survey or experiment. The Sources of data collection are both primary and secondary. In primary sources the data has been collected through the structured questionnaires circulated through the mode of Google Forms constitutes for the present study. Though, extensive literature search and adoption of text from different websites, published documents and books for report preparation constitutes secondary data for this study. Tools and techniques of analysis: Percentage Analysis, Pearson Correlation Analysis and Linear Regression are the tools used to establish the relationship between personality traits and contextual performance and study the impact of the same. Instrument Used is MS Excel, and SPSS is used to create and analyzed pie charts and correlation and regression tables.



#### IV Data Analysis and Interpretation

In this study the population was residents of India, comprising of men and women of all age groups, educational status, socio-economic status, and residential areas who have some amount of experience working in an organization. The data has been collected from the participants through the medium of Google forms. Tools and techniques of analysis: Percentage Analysis, Pearson Correlation Analysis, and Linear Regression are the tools used to establish a relationship between personality traits and contextual performance and study the impact of the same. The data then has been modeled into pie charts and tables through Excel and SPSS. The data has been predominantly divided into demographics, personality traits, and contextual performance.

**Demographics:** The data has been studied based on Gender and Age.

**Table no-1**

S.No	Items	Options	No of Respondents	% of Responses
1	<b>Genders</b>	Male	86	43%
		Female	114	57%
2	<b>Age</b>	21 and under	6	3%
		22 – 27	106	53%
		28 and above	88	44%

**Interpretation:** According to table no-1 that both gender and age of respondents the majority of participants, 57% are female with male participants being 43% and the age of respondents is 53% are 22 – 27, 44% are 28 and above and only 3% are 21 and under.

#### B. Personality Traits

Participants are analyzed on personality traits –Extraversion,Conscientiousness,Openness, Agreeableness and Neuroticism.

##### 1) Extraversion: Table2

S.No.	Options	No. of Respondents	% of Responses
1.	Disagree	2	1%
2.	Neutral	38	19%
3.	Agreeable	144	72%
4.	Most Agreeable	16	8%
5.	Total	200	100%

**Interpretation:**According to table no-2that 1% disagree that they are extroverts, 19% are neutral, 72% are agreeable, and 8% are most agreeable on their extroversion traits. The majority of participants, 72% are extroverts.

##### 2) Conscientiousness: Table3

S.No.	Options	No. of Respondents	% Of Responses
1.	Disagree	2	1%
2.	Neutral	12	6%
3.	Agreeable	146	73%
4.	Most Agreeable	40	20%
5.	Total	200	100%

**Interpretation:**According to table no 3that 1% disagree that they are conscientious, 6% are neutral, 73% are agreeable, and 20% are most agreeable on their conscientious traits. The majority of participants, 73% are conscientious.

##### 3) Openness: Table4

S.No.	Options	No. of Respondents	% of Responses
1.	Disagree	2	1%
2.	Neutral	34	17%
3.	Agreeable	144	72%

4.	Most Agreeable	20	10%
5.	Total	200	100%

**Interpretation:** According to table no 4 that 1% disagree that they are conscientious, 17% are neutral, 72% are agreeable, and 10% are most agreeable on their openness traits. The majority of participants, 72% are high on openness.

#### 4) Agreeableness: Table 5

S.No.	Options	No. of Respondents	% of Responses
1.	Neutral	14	7%
2.	Agreeable	114	57%
3.	Most Agreeable	72	36%
4.	Total	200	100%

**Interpretation:** According to table no 5 that 7% are neutral, 57% are agreeable, and 36% are most disagreeable on their agreeableness traits. The majority of participants, 57% are high on agreeableness.

#### 5) Neuroticism: Table 6

S.No.	Options	No. of Respondents	% of Responses
1.	Least Agreeable	8	4%
2.	Disagreeable	102	51%
3.	Neutral	34	17%
4.	Agreeable	8	4%
5.	Total	200	100%

**Interpretation:** According to table no 6 that 7% are neutral, 57% are agreeable, and 36% are most disagreeable on their agreeableness traits. The majority of participants, 57% are high on agreeableness.

### C. Contextual Performance

The participants are analyzed over whether they are performing contextually besides their job. Tasks including - active participation in meetings, taking on challenging roles, getting along with coworkers, maintaining stress and emotions during job etc.

**Table 7**

S.No.	Options	No. of Respondents	% of Responses
1.	Least Agreeable	8	4%
2.	Agreeable	102	51%
3.	Neutral	34	17%
4.	Most Agreeable	8	4%
5.	Total	200	100%

**Interpretation:** According to table no 7 that 4% are least agreeable, 51% agreeable, 17% are neutral, 4% are most agreeable that they perform contextually too. The majority of participants, 51% are high on contextual performance i.e., they perform beyond their job performance and are also focused on the surrounding performance. In above information can be interpreted that the participants are high on the positive personality traits and low on the negative personality trait. It can also be seen that the participants are also high on contextual performance.

### Pearson Correlation Analysis and Regression Analysis

#### A Pearson Correlation Analysis between Extraversion and Contextual Performance

**Table 8**

Correlations			
		EXTRAVERSION	CONTEXTUAL PERFORMANCE
EXTRAVERSION	Pearson Correlation	1	.698**
	Sig. (2-tailed)		.000
	N	100	100
CONTEXTUAL PERFORMANCE	Pearson Correlation	.698**	1
	Sig. (2-tailed)	.000	

	N	200	200
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\*\*. Correlation is significant at the 0.01 level (2-tailed).

There is a significant positive relationship between Extraversion and Contextual Performance,  $r(98) = .69$ ,  $p = .000$

## B Linear Regression Analysis of Extraversion and Contextual Performance

**Table 9**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.698 <sup>a</sup>	.487	.481	.32735

a. Predictors: (Constant), EXTRAVERSION

Simple correlation and is 0.69, which indicates a high degree of correlation. Here, 48.10% of the total variation in Contextual Performance can be explained can be explained by Extroversion which is large

**Table 10**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.958	1	9.958	92.929	.000 <sup>b</sup>
	Residual	10.502	98	.107		
	Total	20.460	99			

a. Dependent Variable: CONTEXTUAL PERFORMANCE

b. Predictors: (Constant), EXTRAVERSION

Here,  $p < 0.0005$ , which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

**Table 11**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.529	.259		5.900	.000
	EXTRAVERSION	.647	.067	.698	9.640	.000

a. Dependent Variable: CONTEXTUAL PERFORMANCE

To present the regression equation as: Contextual Performance = 1.529 + 0.647 (Extraversion)

**Interpretation:** It can be interpreted that one unit change in the independent variable (Extraversion) will bring 48.10% of variation in the dependent variable (Contextual Performance)

## C Pearson Correlation Analysis between Conscientiousness and Contextual Performance

**Table 12**

Correlations			
		CONSCIENTIOUSNESS	CONTEXTUAL PERFORMANCE
CONSCIENTIOUSNESS	Pearson Correlation	1	.508**
	Sig. (2-tailed)		.000
	N	100	100
CONTEXTUAL PERFORMANCE	Pearson Correlation	.508**	1
	Sig. (2-tailed)	.000	
	N	100	100

\*\*. Correlation is significant at the 0.01 level (2-tailed).

There is a significant positive relationship between Conscientiousness and Contextual Performance,  $r(98) = .50$ ,  $p = .000$

## D Linear Regression Analysis of Conscientiousness and Contextual Performance

**Table 13**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.508 <sup>a</sup>	.258	.250	.39361

a. Predictors: (Constant), CONSCIENTIOUSNESS

Simple correlation and is 0.50, which indicates a high degree of correlation. Here 25.80% of the total variation in Contextual can be explained can be explained by Conscientiousness which is large

**Table 14**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.277	1	5.277	34.064	.000 <sup>b</sup>
	Residual	15.183	98	.155		
	Total	20.460	99			

a. Dependent Variable: CONTEXTUAL PERFORMANCE

b. Predictors: (Constant), CONSCIENTIOUSNESS

Here,  $p < 0.0005$ , which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

**Table 15**

Coefficients <sup>a</sup>					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	2.087	.331		.000
	CONSCIENTIOUSNESS	.462	.079	.508	.000

a. Dependent Variable: CONTEXTUAL PERFORMANCE

To present the regression equation as:

$$\text{Contextual Performance} = 2.087 + 0.462 (\text{Conscientiousness})$$

**Interpretation:** It can be interpreted that one unit change in the independent variable (Conscientiousness) will bring 25.00% of variation in the dependent variable (Contextual Performance)

## E Pearson Correlation Analysis between Openness and Contextual Performance

**Table 16**

Correlations			
		OPENNESS	CONTEXTUAL PERFORMANCE
OPENNESS	Pearson Correlation	1	.705**
	Sig. (2-tailed)		.000
	N	100	100
CONTEXTUAL PERFORMANCE	Pearson Correlation	.705**	1
	Sig. (2-tailed)	.000	
	N	100	100

\*\*. Correlation is significant at the 0.01 level (2-tailed).

There is a significant positive relationship between Openness and Contextual Performance,  $r(98) = .70$ ,  $p = .000$

## F Linear Regression Analysis of Openness and Contextual Performance

**Table 17**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.705 <sup>a</sup>	.497	.492	.32393

a. Predictors: (Constant), OPENNESS

Simple correlation and is 0.70, which indicates a high degree of correlation. Here, 49.20% of the total variation in Contextual Performance can be explained can be explained by Openness which is large

**Table 18**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.177	1	10.177	96.987	.000 <sup>b</sup>
	Residual	10.283	98	.105		
	Total	20.460	99			
a. Dependent Variable: CONTEXTUAL PERFORMANCE						
b. Predictors: (Constant), OPENNESS						

Here,  $p < 0.0005$ , which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

**Table 19**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.563	.250		6.249	.000
	OPENNESS	.624	.063	.705	9.848	.000
a. Dependent Variable: CONTEXTUAL PERFORMANCE						

To present the regression equation as: **Contextual Performance = 1.563 + 0.250 (Openness)**

**Interpretation:** It can be interpreted that one unit change in the independent variable (Openness) will bring 49.20% of variation in the dependent variable (Contextual Performance)

#### G Pearson Correlation Analysis between Agreeableness and Contextual Performance

**Table 20**

Correlations			
		AGREEABLENES S	CONTEXTUAL PERFORMANCE
AGREEABLENESS	Pearson Correlation	1	.604**
	Sig. (2-tailed)		.000
	N	100	100
CONTEXTUAL PERFORMANCE	Pearson Correlation	.604**	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.01 level (2-tailed).			

There is a significant positive relationship between Agreeableness and Contextual Performance,  $r(98) = .60$ ,  $p = .000$

#### H Linear Regression Analysis of Agreeableness and Contextual Performance

**Table 21**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.604 <sup>a</sup>	.365	.358	.36416
a. Predictors: (Constant), AGREEABLENESS				

Simple correlation and is 0.60, which indicates a high degree of correlation. Here, 35.80% of the total variation in Contextual Performance can be explained can be explained by Agreeableness which is large.

**Table 22**

ANOVA <sup>a</sup>
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Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.464	1	7.464	56.284	.000 <sup>b</sup>
	Residual	12.996	98	.133		
	Total	20.460	99			
a. Dependent Variable: CONTEXTUAL PERFORMANCE						
b. Predictors: (Constant), AGREEABLENESS						

Here,  $p < 0.0005$ , which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

**Table 23**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.417	.347		4.083	.000
	AGREEABLENESS	.596	.079	.604	7.502	.000
a. Dependent Variable: CONTEXTUAL PERFORMANCE						

To present the regression equation as: **Contextual Performance = 1.417 + 0.596 (Agreeableness)**  
**Interpretation:** It can be interpreted that one unit change in the independent variable (Agreeableness) will bring 35.80% of variation in the dependent variable (Contextual Performance)

#### G Pearson Correlation Analysis between Neuroticism and Contextual Performance

**Table 24**

Correlations			
		NEUROTICISM	CONTEXTUAL PERFORMANCE
NEUROTICISM	Pearson Correlation	1	-.701**
	Sig. (2-tailed)		.000
	N	100	100
CONTEXTUAL PERFORMANCE	Pearson Correlation	-.701**	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.01 level (2-tailed).			

There is a significant negative relationship between Neuroticism and Contextual Performance,  $r(98) = -.70$ ,  $p = .000$

#### H Linear Regression Analysis of Neuroticism and Contextual Performance

**Table 25**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.701 <sup>a</sup>	.492	.486	.32579
a. Predictors: (Constant), NEUROTICISM				

Simple correlation and is 0.70, which indicates a high degree of correlation. Here, 48.60% of the total variation in Contextual Performance can be explained can be explained by Neuroticism which is large

**Table 26**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.058	1	10.058	94.761	.000 <sup>b</sup>
	Residual	10.402	98	.106		
	Total	20.460	99			
a. Dependent Variable: CONTEXTUAL PERFORMANCE						
b. Predictors: (Constant), NEUROTICISM						

Here,  $p < 0.0005$ , which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

**Table 27**

		Coefficients <sup>a</sup>				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.812	.089		54.120	.000
	NEUROTICISM	-.409	.042	-.701	-9.735	.000

a. Dependent Variable: CONTEXTUAL PERFORMANCE

To present the regression equation as:

$$\text{Contextual Performance} = 4.812 + (-0.409) (\text{Neuroticism})$$

**Interpretation:** It can be interpreted that one unit change in the independent variable (Neuroticism) will bring 48.60% of variation in the dependent variable (Contextual Performance)

### Findings of the Study:

As a whole, a majority of participants have been found out to be extroverts, they find themselves to be vital, energetic and lively (40.00%), however many find themselves as being giving into conflicts (24.00% having neutral or disagreeable opinions). 71.00% of participants are self-assertive. They also have rated themselves high on conscientiousness. 21.00% of participants have high standards of themselves. There has been a high percentage of variance in case of openness. 55.00% are attentive and able to concentrate. 28.00% are curious and exploring. 57.00% of participants positively take on challenges without hesitation. In case of agreeableness, they have rated themselves as high. 49.00% of participants are considerate and thoughtful of others. An astonishing 65.00% feel empathy and concern for their colleagues and the organization even though less participants get along well with their coworkers and help them. Participants are also found to be open to. There however are conflicting views on Neuroticism. As there are polarizing views, in case of becoming anxious in unpredictable environments, there have been equal favors in both agreeable and disagreeable opinions. Similarly in case of taking offence, there are split views. However, in stressful situations, many find it easier to bounce back (60.00%). Neuroticism impacts the contextual performance negatively. 79.00% of participants don't become anxious in stressful environments. 81.00% can bounce after stressful events. 79% of participants don't get easily offended. In case of contextual performance, many seem to give importance to contextual performance and engage in it. 70.00% of participants responded positively to looking for new challenges. 60.00% claim to do more than what is expected of them. 79.00% of participants responded positively to participating in meetings. 97.00% of participants responded positively to looking for ways to improve their performance. However, there are less favorable views in comparison on contributing to organizational work, with 39.00% having neutral opinions.

### Concluding Comments

This study aims to show whether there is any relationship between personality traits and contextual performance and if it, is it positive or negative. The results of the study show that there is a meaningful relationship between the components of personality contextual performance. Agreeableness, Conscientiousness, and Extraversion are closely related to contextual performance in the academic sphere. Openness however shows the most significant relationship with Contextual performance, with the variable change being 49.20% change in a unit change of openness. Contextual performance of performance is also impacted by extraversion with 48.10% of change due to a unit change of extraversion. It can be said that participants who are more considerate of their contextual performance are extroverts, who are more engaging with their coworkers and organization. Extraversion helps in engaging beyond the job as they also function beyond their job. It can be noted that personality traits like agreeableness are contributing to contextual performance like helping coworkers and keeping in touch with coworkers beyond the organization. Extraversion helps with active participation and reduced conflicts. Conscientiousness helps with being more contributing to the organization and voluntary contribution. Neuroticism on the other hand is negatively associated with contextual performance i.e. stressful, anxiety, mood instability negatively impacts contextual performance.

### Emerging Managerial Implications

It can be seen that personality traits like extraversion, openness, agreeableness, and conscientiousness have a positive impact on contextual performance. In an organizational setting, personality might not have a that significant effect on job performance as they are more related to the knowledge, skills, and attributes of the

employee, however contextual performance; helps in supporting the job performance of the employee. Personality indicates as in who more is willing to work on their contextual performance, as they would prefer to engage more with their work surroundings, beyond their job. As openness is a key contributing factor to contextual performance, organizations may open up more ways in which workers may engage in team-building exercises, and building interpersonal relationships. Personality traits like agreeableness and extraversion, helps employee be more corporative in an organizational setting. From an applied perspective, the results could be useful in an organizational setting, particularly in relation to the formation of working groups, given that certain personality characteristics of group members could influence their contextual performance. These results also stress the importance of promoting self-efficacy among employees related to group tasks. Lastly, rewards and incentives should be set up to address employees who perform helping behaviors that contribute to the overall goals of an organization as well as behaviors that contribute strictly to individuals' projects.

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# **Analysis of Literacy Level of Finance Among High School Students of Pune (Maharashtra)**

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## **Abstract**

Youth must have adequate knowledge of finances for his or her future. This is of utmost importance within the context of a rising financial system like India in which social protection advantages after retirement are absent in contrast to numerous advanced nations. Also, boys and girls must accrue economic choice making because of the emergence of complicated economic products. This necessitates that a student must be financially literate to make sound economic planning. Teachers, peers, buddies at school and mother and father at home can create financial focus thus developing sound financial way of thinking. To analyse the financial literacy level of High school students, the researcher studied 418 high school students in Pune, Maharashtra. Along with this, 95 parents were also questioned to gain their perspective. The questionnaire method was used to gather primary data. It was found that students are very interested in attaining financial literacy. Further, it was revealed that parents are influential in building the financial attitude of school students. Conducting a quiz and other financial games were found to have significant influence on financial attitude of school students.

***Keywords - Basic financial literacy, School students, Advanced financial education, Monetary issues***

## **Introduction**

An individual who is monetarily proficient knows how to procure, oversee and put away cash. He knows about monetary items and applies his insight to utilize them. Recent advancements have made monetary schooling and mindfulness progressively significant for monetary prosperity for a person's wellbeing.

The objective of this paper is to attempt to understand the level of financial literacy of school students and parents' attitude towards the same. The relationship between financial literacy and financial attitude of students and parents was also studied. Although several studies have been conducted in the subject of financial literacy, not many have considered the impact of financial literacy of parents on financial attitude of school students. This paper helps to fill this gap.

It is vital that parents have a correct attitude towards developing financial literacy towards their child because this will help in making financial choices and with this information expertise they can pick the best for their future, ready to distinguish enormous number of monetary items and monetary suppliers and in the end, it will prompt shopper security.

India is presently developing as expected place for its occupant where they can look forward for having sound way of life. This can ultimately be accomplished whenever all have equivalent chance for schooling and business. One of the significant blockades for getting great business is having right knowledge. This can be praised by giving them legitimate instruction on financial planning preparation.

## **Research Objectives**

1. To study the difference in attitude of boys and girls towards financial literacy.
2. To study the attitude of parents towards financial literacy of their child.

## **Research Hypotheses**

**H1A** There is a significant difference in the financial attitude among boys

and girls.

**H1B** Learning possibilities with mother and father have a significant effect on a student's financial attitude.

Further divided into four hypotheses:

**H1Ba** - There is a significant difference in the financial attitudes of students depending on their mother's qualifications.

**H1Bb** - There is a significant difference in the financial attitudes of students depending on their mother's occupation.

**H1Bc** - There is a significant difference in financial attitudes of students depending on their father's qualification.

**H1Bd** - There is a significant difference in financial attitudes of students depending on their father's occupation.

## **Literature Review**

Based on earlier studies, the researcher gives insights on financial literacy amongst school students. In the existing literature review, the first segment addresses whether the effect of various factors (demographic variables such as gender, class, mother's qualification, mother's occupation, father's qualification, father's occupation impact financial attitude) improves financial literacy. In the second segment is presented the impact of social learning opportunities with parents and how parental influence impacts the financial attitude of students.

### **Gender**

For young girls and women, having financial literacy skills is very important. Women also tend to report not knowing the information on financial knowledge because they are less confident in their personal financial knowledge.

**Donkers et al. (2001)** in their research discovered a link between risk preference and gender, age, level of education, and income. They discovered that women and the elderly had a negative attitude toward risk, whereas education, income level, and people's attitudes have a relationship. **Malone et al. (2009)** discovered in their study a key worry that women with a high level of education and a high level of income had a more optimistic assessment of their own financial situation than men. **Longobardiet et al. (2017)** in their literature reported that male members are

sounder in making financial judgments than females. They further say that efforts should be made to close this gap/difference.

### **Mother's Qualification**

In particular, if a respondent's mother left school in between, there was little doubt that mother's education was linked to learning about financial literacy.

**Murphy (2005)** discovered in his research that adolescents whose mothers had not completed secondary school performed much worse on a financial literacy test. Having said that, the competency levels of most college students were typically, poor.

### **Father's Qualification**

The degrees of general information, general mindfulness, the levels of comprehension of understanding, levels of recognition, capabilities to comprehend, decision-making abilities, and so on of fathers all grow dramatically as their educational level rises.

**Mandell and Klein, (2009)** in their research observed that students whose fathers and mothers are in the career of finance have an extra degree of monetary skill ability than college students do who's calling is not in finance. The inclusion of father and mother with their career experience whilst speaking with their children can simply have an effect on the attitude of the child.

### **Mother's Occupation**

Financial literacy research has also revealed that one of the factors of literacy is one's career.

**Kasman, Heuberger, and Hammond (2018)**, in their review opine that working women face a greater pressure because they are more likely to balance successful careers with the responsibilities of parenting and childrearing. Many women work in India, providing financial support to their families, but they place less emphasis on taking risks due to a fear of danger.

### **Father's occupation**

Financial literacy education can be associated with one's occupational status. Individuals in expert professional occupations, as well as those in administrative ones, had higher financial proficiency ratings.

**Calamato (2010)** has discovered in his research that low-pay fathers are sure, to go out of school, something that, over the long run, provides to their financial illiteracy. This loss of schooling of households scored lower at the financial schooling check than students in better earnings degree among own circle of relatives.

### **Parental influence on their child's financial attitude, behavior and knowledge**

**Knapp (1991)** examined how students attempt to enhance their know-how in Financial Literacy which facilitates them in taking first-class decisions, having enhanced mind-set towards money, keep assets thus enhancing highly satisfactory lifestyles and heading off pointless waste of money. **Chen & Volpe (1998)** observed that females accumulate private finance expertise from their mother and father. However, it's been observed that males are better informed than females.

**Hilgert, Hogarth & Beverly (2003)** discovered that financial knowledge was clearly associated with self-financial behavior. **Bandura, (1986); Clarke et al. (2005)** conducted a research and found that youngsters' whose parents included them in conversation and those who are taught with the help of their mother or father is to be greater assured on their values, beliefs and knowledge, and for that reason it allows in shaping youngsters' questioning toward finance and which may be visible in their behavior.

Report by **Organization for Economic cooperation & Development (OECD) in 2005** says that *to take a good financial decision, financial education is needed but which is lacking in young and adults (both). Financial Literacy is well known for all age groups and even across geographical areas.* **Allen et al. (2007)** analysed in their look at and evaluated informed knowledgeable own circle of relatives maintains on discussing with circle of relatives and children are prompted through father and mother and heading in the right direction for allowances, present income. It leads to enhance their know-how and its impact may be visible of their behavior, mind-set and they're for money. **Bongini et al. 2018)** analysed monetary

know-how is vital to take selections in any other case it causes insolvency. **Financial decision-making** deals with study of parental influence to their children. It affects a person decision making with money related matters.

**Lusardi et al. (2009) in their research study** it has been found that their monetary information is influenced one's parent tutoring level. Students whose parents had completed their everyday schedule preparing will undoubtedly be monetarily proficient and discovered that with lower levels of instruction.

**Rahmatullah et al. (2020) in** a previous review mention that individuals who taken in some huge experience about overseeing reserves and monetary issues from their parents had higher monetary data, which peroxide by financial education.

**Moore and Asay (2013)** reported in their review the association of parental influence on a child's financial abilities. They suggest that the singular exercises of individuals impact the social behaviour of the whole family. **Firmansyah (2014)** found in their review that adolescents get the demeanor and social lead from their family and this can predict the kind of financial choices and the board that they will pick later on in future. **Kagotho et al. (2017)** observed, discussed and found that youngsters in where parents effectively engaged them in financial issues were not just likely to report their financial related assets, yet they were additionally expected to be savers themselves.

## **Research Methodology**

### **Sample and sample Size**

There were 2 types of respondents – high school students and parents.

**Students** - 900 questionnaires were circulated to high school students studying in various government and private schools of class 8<sup>th</sup> to 12<sup>th</sup> standard from Pune, Maharashtra. Out of those, 418 school students' responses were received.

**Parents** - Questionnaire was also circulated to 130 parents. However, only 95 responses were received.

### **Data Collection**

#### **Secondary data**

The main focus of secondary data had been studying on financial attitude of school students (boys and girls), learning opportunities from Parents and also attitude of parents towards financial literacy of their child. Secondary data was collected from research papers, national and international surveys. Data was collected from past to the present period.

### **Primary data**

The primary data is collected from the students (boys and girls) from class 8<sup>th</sup> to 12<sup>th</sup> standard of government, private schools of Pune, Maharashtra. The main objective of designing questionnaire was to know the level of financial literacy among school students (boys and girls), find financial attitude of students and parents for financial literacy. For the pilot study, a structured questionnaire was distributed. Certain changes were made in it as suggested by the respondents.

### **Reliability Testing**

It is required to test internal reliability of each construct with its distinct number of items for the two constructs that this study focused on.

Cronbach's alpha for objects created for the same construct were determined to verify internal reliability. The estimated Cronbach's alpha values for the two constructs are shown in Table 1. All the values are above the cut-off point 0.7 recommended by Nunnally and Bernsties (1994) indicating that all the five constructs have strong internal consistency.

**Table 1: Reliability Analysis**

<b>Construct</b>	<b>Number of</b>	<b>Cronbach's alpha</b>
Learning opportunities with Parents	8	0.84
Financial Attitude	4	0.753

Measures utilized for inferential examination incorporate t-test, ANOVA, investigation and so on. In the exploration research, the study embraced both the descriptive and inferential data investigation methods.

## Sample Profile

This section shows the profile of the 418 school students surveyed in the elected schools of Pune, Maharashtra based on five variables (gender, educational qualification of mother and father, occupation of mother and father).

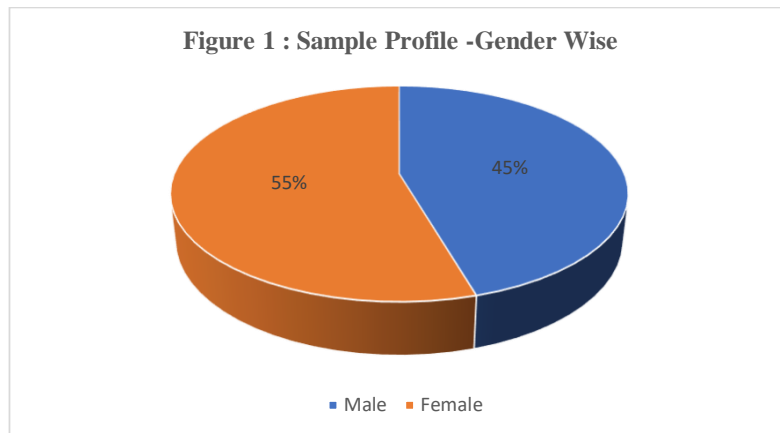
**Table 2: Profile of the Respondents**

Variable	Categories	Frequency	Response %
Gender	Boys	190	45.5
	Girls	228	54.5
Mother's Qualification	Below Higher Secondary	14	3.3
	Higher Secondary	48	11.5
	Graduate	165	39.5
	Postgraduate and Above	191	45.7
Mother's Occupation	Self Employed	63	15.1
	Service	99	23.7
	Business	80	19.1
	Housewife	176	42.1
Father's Qualification	Below Higher Secondary	12	2.9
	Higher Secondary	133	31.8
	Graduate	247	59.1
	Postgraduate and Above	26	6.2
Father's Occupation	Self Employed	131	31.3
	Service	178	42.6
	Business	100	23.9
	Unemployed	9	2.2

## Gender

The findings in Table 2 and Figure 1 show that that 45.5% of the participants in the study are boys and 54.5% are girls, which can be considered as a good representation of both the genders in the sample.

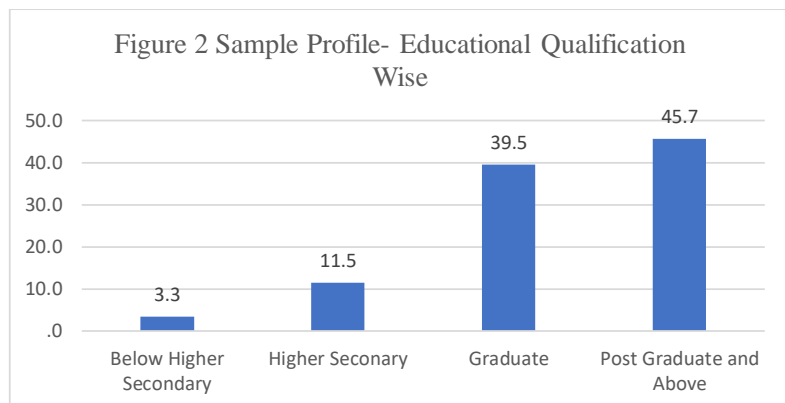




**Figure 1: Sample Profile -Gender Wise**

### **Mother's Educational Qualification**

The findings in the Table 2 and Figure 2 show that those mothers who were Post graduates and graduates have been found to have substantial impact on Their children for providing financial literacy that is 45.7% and 39.5%. Mothers with a higher secondary education and those with a lower secondary education had a lower impact on their children's financial literacy, by 11.5 percent and 3.3 percent, respectively.

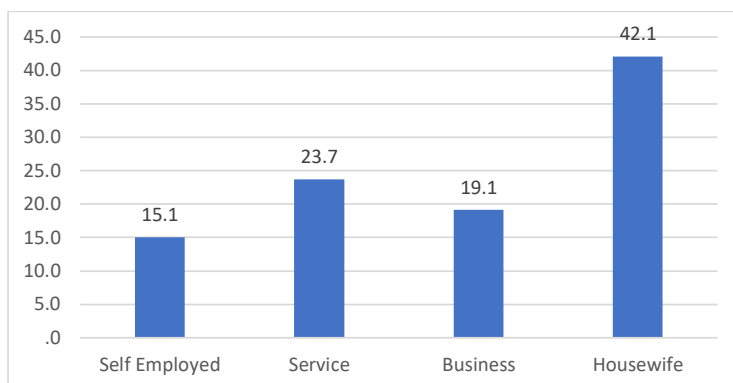


**Figure 2: Sample Profile- Mother's Educational Qualification Wise**

### **Mother's Occupation**

The findings in the Table 2 and Figure 3 show that as far as mother's occupation is concerned, the major respondents 42.1% were housewives,

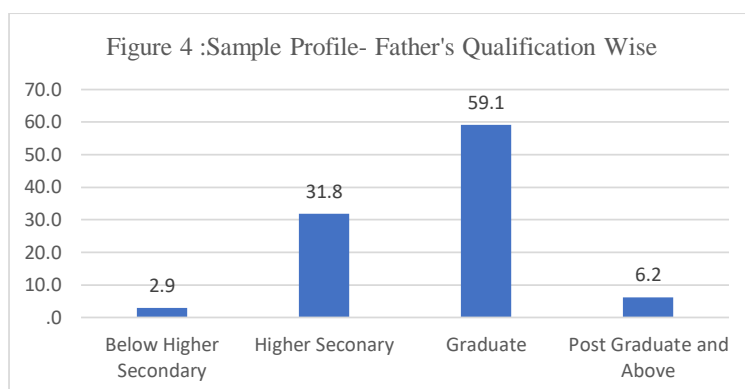
followed by working girls (service) 23.7%. Then 19.1% are business girls and 15.4% are self-employed.



**Figure 3: Sample Profile - Mother's Occupation Wise**

### **Father's Educational Qualification**

The findings in Table 2 and Figure 4 show that the fathers who had graduate and higher secondary education were found to have a substantially more effect on their children i.e., of (59.1%) and 31.8% than those who were post graduate and below higher secondary education. Their impact is less i.e., 6.2% and 2.9%.

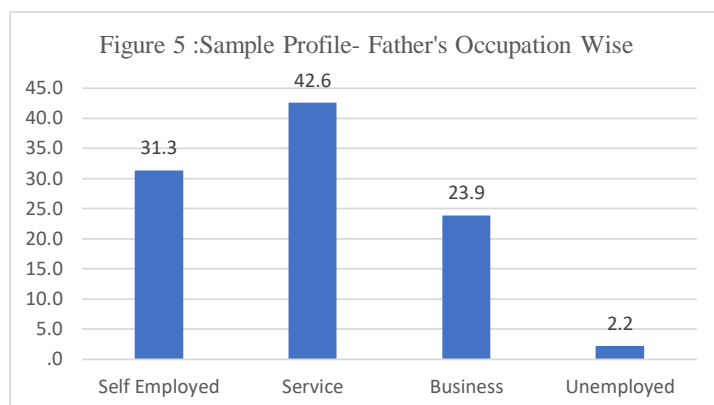


**Figure 4: Profile- Father's Qualification Wise**

### **Father's Occupation**

The findings in the Table 2 and Figure 5 show that the sample consists of 42.6% of fathers as service class and 31.3% are self-employed and

fathers who belong to business is 23.9% and unemployed 2.2%.



**Figure 5: Sample Profile- Father's Occupation Wise**

## Factor Loading

Factor loading is the correlation of each item and the factor which indicates the degree of correspondence between the item and the factor. Only those items with a factor loading of 0.50 or higher (ignoring the signs) are considered significant (Hair et al., 2005). The factor loadings of all the items are above 0.650 which indicates their high correlation with the respective factors.

**Table 3: Factor Loadings**

Factor	Item Code	Item Description	Factor Loading				
			1	2	3	4	5
<b>1</b> <b>Learning opportunities with parents</b>	<b>PI2</b>	I appreciate when my parent's advice regarding money management.	.680				
	<b>PI3</b>	My parents discuss finances in house.	.674				
	<b>PI4</b>	<b>Saving is something I do regularly because my parents wanted me to save when I was little.</b>	.664				
	<b>PI5</b>	My parents are proud of my money saving habit.	.663				
	<b>PI6</b>	My parents teach me how to use a debit card appropriately.	.637				
	<b>PI7</b>	I talk about money management with my parents.	.613				
	<b>PI8</b>	My parents are good example for me when it comes to money management.	.602				

	Item Code	Item Description	1	2	3	4	5
<b>Financial Attitude</b>	<b>FA1</b>	I am willing to spend money on things that are important to me.					.759
	<b>FA2</b>	I like to buy things because it makes me feel good.					.745
	<b>FA3</b>	After deciding about money management, I tend to worry too much about my decision.					.718
	<b>FA4</b>	I think it is more satisfying to spend money than to save it for the future.					.689

Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; Rotation converged in 7 iterations

### Hypothesis Testing

To examine the students' opinions of financial literacy in relation to their demographic factors. Financial literacy research has also found that qualification and occupation is one of the drivers of financial literacy.

*a. To examine the differences in students' perceptions of the dimension of Financial Literacy across Gender, the following hypotheses was proposed:*

- H1A- There is significant difference in the Financial Attitude of students between boys and girls.

The hypotheses H1A has been tested by using Independent Samples t-test. The results obtained through independent samples t-test on financial literacy perceptions between gender categories i.e., boys and girls are presented in Table 4 Results of Levene's Test for Equality of Variances reveal that variances among boys and are equal for the dimensions of financial literacy i.e., financial attitude ( $F=1.649, p>.10$ )

Therefore, for the dimensions, t-values in the 'equal variance assumed' row are used for analyzing the results of independent samples t-test. It can be noticed that there are no significant differences between perceptions of boys and girls in case of Financial attitude ( $t=-1.649, p>.10$ ). This signifies that the gender of students is not a differentiating factor with regards to the students' financial literacy. Both boys' and girls' students have similar perceptions of all the dimensions of financial literacy viz. financial attitude Hence the hypotheses H1A are rejected.

**Table 4: Results of Independent Sample t-test for Relationship Quality between Boys and Girls**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	T	Df	p-value
FA	Equal variances assumed	0.206	0.650	-1.649	416	0.1
	Equal variances not assumed			-1.655	407.048	0.099

**b. Learning possibilities with mother and father have a significant effect on a student's financial attitude.**

*Further divided into four:*

**1.To examine the differences in students' perceptions of the dimension of Financial Literacy as per Mother's Qualification, the following hypothesis is proposed:**

- H1Ba – There is significant difference in the Financial Attitude of students of financial literacy across their mother's qualification.

Table 5 provides results of ANOVA for hypotheses H1B. The results indicate that there are significant differences in the financial attitude ( $F=3.712$ ,  $p<0.05$ ). Hence hypotheses H1Ba are accepted. Table 5 also shows that students whose mothers are less qualified (below higher secondary) have lesser financial attitude and financial knowledge (mean scores = 2.68 and 39.93 respectively. Hence H1B are accepted.

**Table 5: ANOVA for Mothers' Qualification**

		Sum of Squares	Df	Mean Square	F	Sig.
F A	Between Groups	9.457	3	3.152	3.712	.012
	Within Groups	351.545	414	.849		
	Total	361.002	417			

**2. To examine the differences in students' perceptions of the dimension of Financial Literacy across Mother's Occupation, the following hypotheses are proposed:**

- H1Bb-There is significant difference in the financial attitude of students of financial literacy across their mother's occupation.

The results for testing the significance of difference in the dimension of financial literacy of students across their mothers' occupations (H1Bb) are shown in Table 6. The results fail to provide support for the hypotheses. Hence no significant

difference is observed in the dimension of financial literacy i.e., financial attitude ( $F=0.465$ ,  $p>0.10$ ), of students across their mothers' occupations. Hence it can be concluded that the financial literacy of students is not affected by their mothers' occupations. Hence the hypotheses H1Bb is rejected.

**Table 6: ANOVA for Mothers' Occupation**

		Sum of Squares	Df	Mean Square	F	Sig.
FA	Between Groups	1.212	3	.404	.465	.707
	Within Groups	359.790	414	.869		
	Total	361.002	417			

**3. To examine differences in students' perceptions of the dimension of Financial Literacy across Father's Qualification, the following hypotheses are proposed:**

- H1Bc- There is significant difference in the Financial Attitude of students of financial literacy across their father's qualification.

The results for testing the significance of differences in the dimensions of financial literacy of students across their fathers' qualifications (H1Bc) are shown in Table 4.7. The results provide support for the hypothesis H1Bc. Hence it can be inferred that the financial attitude of students differs significantly across their fathers' qualifications.

**Table 4.7: ANOVA for Fathers' Qualification**

		Sum of Squares	Df	Mean Square	F	Sig.
F A	Between Groups	9.954	3	3.318	3.913	.009
	Within Groups	351.048	414	.848		
	Total	361.002	417			

**4. To examine the differences in students' perceptions of the dimensions of Financial Literacy across Fathers' Occupation, the following hypotheses are proposed:**

- H1Bd-There is significant difference in the Financial Attitude of students based of financial literacy across their fathers' occupation.

The results for testing the significance of differences in the dimensions of financial literacy of students across their fathers' occupations (H1Bd) are shown in Table 4.8. The results fail to provide support the hypotheses

**Table 4.8: ANOVA for Fathers' Occupation**

		Sum of Squares	Df	Mean Square	F	Sig.
FA	Between Groups	4.167	3	1.389	1.612	.186
	Within Groups	356.835	414	.862		
	Total	361.002	417			

### Conclusions and Suggestions

Conclusions are summarized as aligned to the objective of the study. The objectives are:

1. To study the difference in attitude of boys and girls towards financial literacy.
2. To study the attitude of parents for financial literacy.

Objectives	Outcomes
To study the difference in attitude of students of boys and girls towards financial literacy.	Students both boys and girls were very interested in attaining financial literacy. They were eager to participate in quiz, role play, games etc. which would make them more financially literate. These activities were found to have significant influence on financial attitude of school students.
To study the attitude of parents for financial literacy.	Attitude of parents for financial literacy was found to be positive. Parents have significant association with financial attitude of students for financial literacy. This implies that parents are influential in building the financial attitude of school students.

### Key Points of Conclusion

1. When it comes to learning chances for children to develop a positive financial attitude, parents have a great influence.
2. In terms of learning prospects, parents have a greater influence on financial attitudes as evidenced by their preferences for various financial literacy objectives. Girls have a lower risk capacity and are more financially dependent than boys.
3. Boys have more succession rights and obligations, and thus have a larger tendency to prepare and make financial decisions in succession.

4. Girls have a higher collective value and are more likely to discuss money difficulties with their family or spouse. At home, girls reveal more financial information.
5. Students of class 12<sup>th</sup> have higher financial attitude. It implies that of higher classes students have stronger financial attitude as compared to students in lower classes.
6. Students' mother higher qualifications have a beneficial impact on healthy financial decisions because they have a strong financial attitude and knowledge, and there are no significant disparities in their financial conduct based on their mothers' qualifications.
7. Children's financial literacy is not affected by their mother's occupation.
8. Students whose fathers have a postgraduate or higher level of education have a more positive financial outlook.
9. The students' financial literacy is unaffected by their father's work in the dimensions of financial attitude.

### **Suggestions to Parents and Researchers**

1. Asking parents to engage in financial literacy programmes can help mould their financial attitudes and beliefs. efforts must be made to improve Parents' financial attitudes, and parents should discuss money issues with their children.
2. Since parents have such a strong influence on their children's attitudes and behaviour when it comes to money, it is critical to instill in them a positive attitude and behaviour towards understanding and managing money now and in the future.
3. Girls should play a larger role in family financial decisions, necessitating financial education and empowerment.

In a nutshell, parents and every student in the school can be taught the value of increased financial literacy, which includes increased financial knowledge, a positive financial attitude, and financial behaviour. The findings of the study could aid in the preparation and improvement of financial literacy among children, youth, and all citizen of the country.

### **Future Scope**

The study adds to the body of knowledge about the role of important stakeholders in instilling financial literacy and moulding a child's financial attitude toward



school education. The study is based on primary data and has a few limitations, including sample selection biases. Further research might be carried out with a broad sample size, encompassing schools from various regions and states. Future research on analyzing the financial attitudes, knowledge, and behaviour of parents, teachers, and even college students could be a fascinating field of study for academics. Additionally, demographic factors such as family composition, geographical location of rural and urban areas, and so on can be incorporated for future research.

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# **IMPACT OF NEP 2020 & FRAMEWORK ON ACCREDITATION OF EDUCATION**

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## **ABSTRACT**

The National Education Policy (NEP) 2020 focuses on key reforms in higher education that prepare the next generation to thrive and compete in the new digital age. The NATIONAL EDUCATION POLICY (NEP 2020), launched on 29 July 2020, outlines the vision of India's new education system. NEP 2020 focuses on five pillars: Affordability, Accessibility, Quality, Equity, and Accountability – to ensure continual learning. It has been crafted consistent with the needs of the citizens as a demand for knowledge in society and economy called for a need to acquire new skills on a regular basis. Thus, providing quality education and creating lifelong learning opportunities for all, leading to full and productive employment and decent work as enlisted in United Nations Sustainable Development Goals 2030, forms the thrust of NEP 2020. The new policy replaces the previous National Policy on Education, 1986 and forms a comprehensive framework to transform both elementary and higher education in India by 2040.

## INTRODUCTION

In 2020, the Indian Ministry of Education introduced the National Education Policy (NEP) 2020, replacing the 34-year-old National Policy on Education, 1986. Along with the many reforms in the policy to strengthen higher education in the country, the NEP mandated accreditation of all state-run schools from grade 1 to 12.



Accreditation is a process carried out to improve the standards of education, outcomes, and governance of schools. It looks at measures such as the quality of teaching, attendance, number of teachers across subjects and grades, safety, financial probity, curriculum, basic sustainable infrastructure, resources, community participation, governance process, and accountability. A fair, transparent, and rigorous accreditation and evaluation process can enable education systems to change the academics, management, and leadership of institutions for the better.

Under this system, all schools (state-run and privately run) have to ensure adherence to established minimum standards in key performance domains. These include the school's administrative responsibility, its infrastructure, teaching quality, community participation, integrity, and inclusion. The process is based on predefined standards by the states for their schools, and is carried out by an authorized body of the state education department.

### What the NEP proposes?

The NEP has asked each state to form an independent and autonomous body, State School Standards Authority (SSSA), by 2023. These SSSA bodies will be responsible for regulating public and private schools and monitoring that they maintain the minimum common standards.

Furthermore, according to the directives in the NEP, the State Council of Education Research and Training will work towards developing a School Quality Assessment and Accreditation Framework with the support of multiple stakeholders (including schools, education departments, and nonprofits) in order to implement the policy effectively. The framework they develop will focus on setting parameters of school performance—such as academia, infrastructure, finances, and teaching quality—and identify critical areas for improvement.

All the schools will be assessed on these set standards, and the self-disclosure of all essential information will be published on the SSSA website as well as on the website of each school. At the end of the assessment, all schools will be provided with a report card consisting of comprehensively analyzed data and insights.

### Why do schools need to be accredited in the first place?

According to a ASER Education Report in 2018, approximate 50% of Indian school-going children cannot read and comprehend a simple text by Standard 5 (age 10). Another education report states, in India, 30% of girls from economically disadvantaged groups have never been to school due to lack of accessibility and viable infrastructure. Accreditation plays a vital role in defining the infrastructural requirements and availability for schools. In fact, according to the Right to Education Act (RTE), schools must provide children with basic infrastructure, including separate toilets for boys and girls. Building on the RTE, the NEP 2020 mandates schools to disclose accreditation data on public domains—the state departments and authorities would be given a list of requirements they have to meet, and their ability to meet them will be made public; this, in turn, will help improve the accountability of the system.

The proposed measures will aid schools, states, communities, and their respective stakeholders in determining these minimum quality standards for education.

By introducing minimum quality standards for schools to follow, the proposed measures to accredit schools can help monitor and build an ecosystem of transparency and accountability to ensure quality education in even the most remote parts of the country. Moreover, it will aid schools, states, communities, and their respective stakeholders in determining these minimum quality standards for education.

### Future pathway and implementation challenges

A successful example of accreditation is the Dubai Schools Inspection Bureau (DISB). The DISB engages school assessors from all over the globe to evaluate their schools. As a result, Dubai's schools have a culture of transparency and accountability, which has helped in improving the overall quality of education in the country.

In India the process of accreditation is being operationalized in accordance with the NEP 2020. The formation of SSSA bodies should help guarantee the maintenance of minimum quality standards based on predetermined parameters. Furthermore, the policy emphasizes transparency by making all fundamental regulatory information available on a public platform.

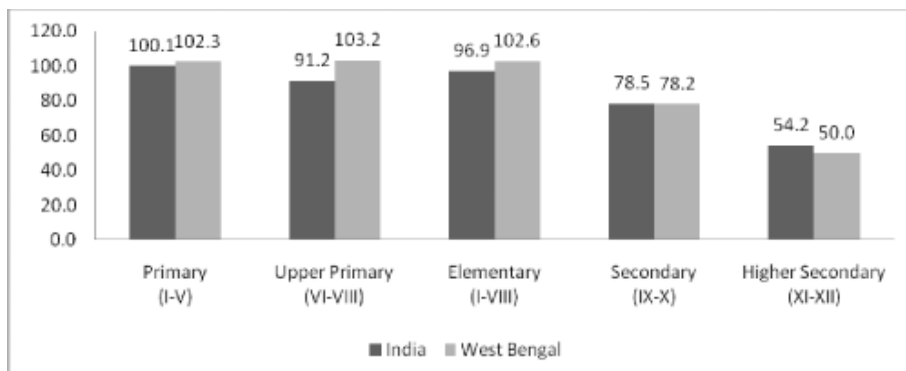
Nonetheless, it is important for us to keep a few potential challenges in mind:

- **Resources:** While accreditation will shed light on the areas where schools need support, will each state be able to provide its schools the resources (both monetary and otherwise) that they need to improve their infrastructure, curriculum, teacher quality, teacher recruitment, etc.?
- **Accessibility:** While the NEP 2020 asks for all accreditation information to be made publicly available, we need to ensure that this is done in a way that will allow community members (especially parents) to understand and engage with it.
- **Potential for uptake:** Schools themselves need to be coached to understand the importance of the accreditation process, what data they need to collect and the importance of data transparency, and how they communicate their gaps to their communities.

Today, states are gearing up for the process of accreditation. And while they are faced with real concerns, the expectation is that each state will embrace the process and use it to improve the overall quality of its schools.

### Higher Education in NEP 2020

The NEP 2020 was conceived to raise the Gross Enrolment Ratio (GER) from the current 26 percent to 50 percent by 2030 in the higher education space. It aims at building the overall personality of students by strengthening infrastructure for open and distance learning, online education and increasing the use of technology in education.



### Gross Enrolment Ratio (GER) in School Education in India and West Bengal in 2014-15

Moreover, the National Research Foundation (NRF) will be set up to boost research work in the country. A National Accreditation Council (NAC) envisaged as a single regulator for higher education institutions across the country will be established. The Higher Education Council of India (HECI) will have multiple verticals to fulfill various roles. Efforts will be undertaken to set up a National Recruitment Agency for all government recruitment exams, and a Common Eligibility Test (CET) for various recruitment exams of the same level.

Moreover, the courses and programmes in subjects, such as Indology, Indian languages, yoga, arts, music, history, culture, and modern India, internationally relevant curricula in the sciences, social sciences, and beyond, meaningful opportunities for social engagement, quality residential facilities and on-campus support, etc. will be fostered to attain this goal of global quality standards.

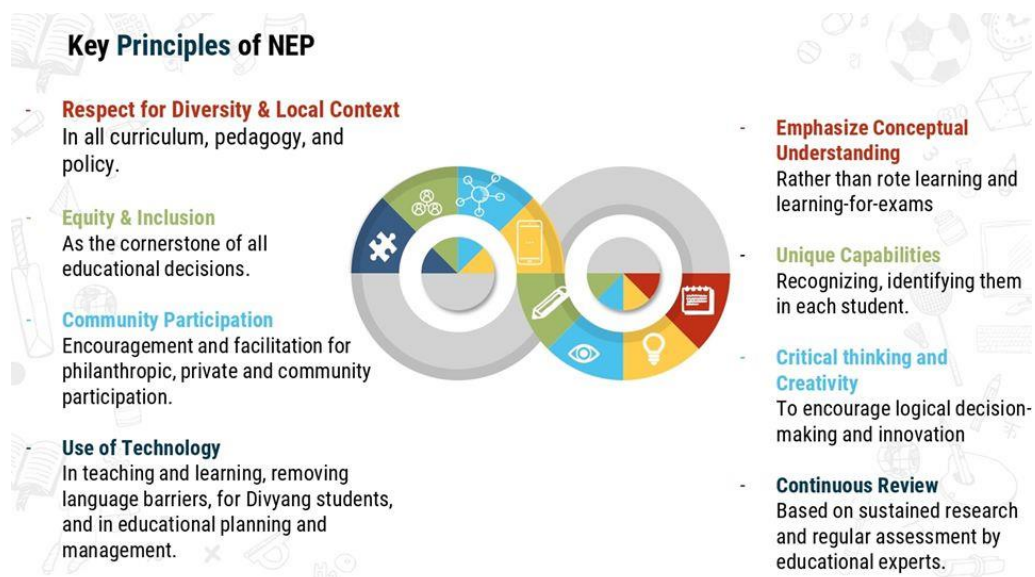
### Accreditation in Higher Education

Regulatory mechanisms of higher education would have “accreditation” conducted by an independent body amongst other key functions. Institutions will have the option to run Open Distance Learning (ODL) and online programmes, provided they are accredited to do so, to enhance their offerings, improve access, increase GER, and provide opportunities for lifelong learning.

The accreditation scheme for improving credibility of Learning Service Provider (LSP) has been developed by National Accreditation Board for Education and Training (NABET), Quality Council of India (QCI) under Department of Industrial Promotion and Internal Trade (DPIIT), Ministry of Commerce and Industries, Government of India. Accreditation ensures Quality Assurance of

Trainer/Faculty, Infrastructure; Program Design (Development and Delivery); Training Management System (3 Dimensions: Hardware, Software, Humanware / Skinware).

## FEATURES OF NEP 2020: HIGHER EDUCATION



## THE FUNDAMENTAL PRINCIPLES OF THE POLICY:

- Recognizing, identifying, and fostering the unique capabilities of each student, by sensitizing teachers as well as parents to promote each student's holistic development in both academic and non-academic spheres.
- According the highest priority to achieving Foundational Literacy and Numeracy by all students by Grade 3.
- Flexibility, so that learners have the ability to choose their learning trajectories and programmes, and thereby choose their own paths in life according to their talents and interests.
- No hard separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams, etc. in order to eliminate harmful hierarchies among, and silos between different areas of learning.
- Multidisciplinary and a holistic education across the sciences, social sciences, arts, humanities, and sports for a multidisciplinary world in order to ensure the unity and integrity of all knowledge.
- Emphasis on conceptual understanding rather than rote learning and learning-for-exams.
- Creativity and critical thinking to encourage logical decision-making and innovation.
- Ethics and human & Constitutional values like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice.

- Promoting multilingualism and the power of language in teaching and learning.
- Life skills such as communication, cooperation, teamwork, and resilience; • focus on regular formative assessment for learning rather than the summative assessment that encourages today's 'coaching culture'.
- Extensive use of technology in teaching and learning, removing language barriers, increasing access for "Divyang" students, and educational planning and management.
- Respect for diversity and respect for the local context in all curriculum, pedagogy, and policy, always keeping in mind that education is a concurrent subject; • full equity and inclusion as the cornerstone of all educational decisions to ensure that all students are able to thrive in the education system.
- Synergy in curriculum across all levels of education from early childhood care and education to school education to higher education.
- Teachers and faculty as the heart of the learning process – their recruitment, continuous professional development, positive working environments and service conditions.
- A 'light but tight' regulatory framework to ensure integrity, transparency, and resource efficiency of the educational system through audit and public disclosure while encouraging innovation and out-of-the-box ideas through autonomy, good governance, and empowerment.
- Outstanding research as a corequisite for outstanding education and development.
- Continuous review of progress based on sustained research and regular assessment by educational experts.
- A rootedness and pride in India, and its rich, diverse, ancient and modern culture and knowledge systems and traditions.
- Education is a public service; access to quality education must be considered a basic right of every child.
- Substantial investment in a strong, vibrant public education system as well as the encouragement and facilitation of true philanthropic private and community participation.

## **THE VISION OF THIS POLICY**

- An education system rooted in Indian ethos that contributes directly to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high-quality education to all, and thereby making India a global knowledge superpower.
- The curriculum and pedagogy of our institutions must develop a deep sense of respect towards the fundamental duties and Constitutional values, bonding with one's country, and a conscious awareness of one's roles and responsibilities in a changing world.
- To instill a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen.



## QUALITY UNIVERSITIES AND COLLEGES:

### A NEW AND FORWARD-LOOKING VISION FOR INDIA'S HIGHER EDUCATION SYSTEM

- Quality higher education must aim to develop good, thoughtful, well-rounded, and creative individuals.
- It must enable an individual to study one or more specialized areas of interest at a deep level, and also develop character, ethical and Constitutional values, intellectual curiosity, scientific temper, creativity, spirit of service, and 21st century capabilities across a range of disciplines including sciences, social sciences, arts, humanities, languages, as well as professional, technical, and vocational subjects.
- A quality higher education must enable personal accomplishment and enlightenment, constructive public engagement, and productive contribution to the society.
- It must prepare students for more meaningful and satisfying lives and work roles and enable economic independence.
- Some of the major problems currently faced by the higher education system in India include:
  - a severely fragmented higher educational ecosystem.
  - less emphasis on the development of cognitive skills and learning outcomes.
  - a rigid separation of disciplines, with early specialization and streaming of students into narrow areas of study.
  - limited access particularly in socio-economically disadvantaged areas, with few HEIs that teach in local languages
  - limited teacher and institutional autonomy;
  - inadequate mechanisms for merit-based career management and progression of faculty and institutional leaders.
  - lesser emphasis on research at most universities and colleges, and lack of competitive peer-reviewed research funding across disciplines.
  - suboptimal governance and leadership of HEIs.
  - an ineffective regulatory system; and large affiliating universities resulting in low standards of undergraduate education.

This policy envisions the following key changes to the current system: o moving towards multidisciplinary universities and colleges, with more HEIs across India that offer medium of instruction in local/Indian languages. moving towards a more multidisciplinary undergraduate education.

The objective of this reformation of the Indian education system is **“No child will be left behind”**. It is intended to fill the gaps in the current education scenario. So, we can say, *NEP 2020 is brought for the ‘learning to learn’ approach.*

Highlights of the new education policy:

- The present school system will be divided into 5 + 3 + 3 + 4 stages as Foundation, Preparatory, Middle & Secondary respectively.
- Mother tongue or regional language will be taught up to at least class 5.
- Vocational education will be integrated from class 6 with 10 days of mandatory internship.
- National Testing Agency will conduct SAT-Like college entrance tests twice a year.
- Students will be benefitted with a 4-Year multi-disciplinary bachelor's program.
- Mid-term drop-out students will be able to complete the degree after a break.
- Foreign colleges could enter India, and Indian universities would go global.
- 

These will be some changes in the existing education policy to bring out the best in oneself, be it any field of study. It can surely make **India a global knowledge superpower**.

### Impact on Students:

NEP 2020 will open up new learning opportunities to the students. Its biggest impact would be the change in the learning environment and the learning process for the students. The new education policy will:

- Increase focus on the skill improvement and competency development of the students.
- Make the students future-ready by building 21st-century skills.
- Make students focus on both academic and non-academic pursuits.
- Provide various learning opportunities for pre-primary, open, and distance-learning students.
- Give access to counseling and other services for students.
- 

### Nearly 30% of students in India drop out after grade 10 – as per KPMG's report.

Therefore, this new national policy on education will also provide multiple exit options for mid-term drop-out students with 1 year of training or 2 years of Diploma.

With so many growing opportunities, students' curiosity and confusion will also grow. So, they are suggested to take the help of the experts and professionals in making the right career decisions. The first expert the students come across is the Teacher. Hence, the Indian government has something to offer for the teachers as well.

### Impact on Teachers:

#### 13% of secondary school teachers in India are not professionally skilled – as per KPMG's report.

Therefore, the Government of India has decided to make their teachers more skilled and equipped with futuristic teaching skills. See what teachers will get from the new education policy:

- Introduction of professional teaching standards.
- Clearer outlined roles and responsibilities.
- Training to monitor and improve their capabilities.
- More focus on 21st-century teaching skills.
- A transparent recruitment and selection process for teachers to motivate them and improve their performance.
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#### Education is not about loading a child with information. It is to develop the body and the mind to the highest possible capability. – Anonymous

Teachers not only guide the students for their academic excellence but also mentor them in taking the right career decisions. Therefore, they should equip themselves with new-age teaching methods.

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# Impact of New Education Policy, Methodology & Opportunities

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## ABSTRACT

India has now reached its 73rd year of independence, and the country continues to strive towards universal or 100 percent literacy. It is important to consider the plans and objectives established for India's independence. The goal is to achieve national equality, which will result in equality in education. This illustrates the necessity of enhancing India's educational system. In view of this, the new National Education Policy has been implemented during the Pandemic Year under the supervision of distinguished scientist Dr. K. Kasturirangan. By offering top-notch education to everyone, the National Education Policy directly aids in the long-term transformation of our country into a fair and thriving knowledge society. The new National Education Policy, which provides a complete framework for primary education through higher education as well as vocational training in both rural and urban India, was adopted by the Union Cabinet of India on July 29, 2020. The new strategy seeks to make education available to everyone from preschool through secondary school, with a 100% Gross Enrolment Ratio (GER) in school education by 2030, and a 50% GER in higher education by 2025. The implementation of NEP 2020 presents both many opportunities and difficult problems to the education community.

**Keywords:** National Education Policy, Higher Education, universalisation, impact on teachers

## INTRODUCTION

With a target of 100 percent Gross Enrolment Ratio (GEER) or zero school dropouts by 2030, the government wants to address social gaps in participation, access, and learning outcomes in school education under the new policy.

**The top 5 highlights of NEP 2020 are:**

- Discontinuation of MPhil programmes
- Many admissions and exit options for degree programmes
- A single regulator for institutions of higher education
- Low stakes board exams
- Common entrance exams for universities.

## Evolution of India's education policy

A timeline from independence to the present: The University Education Commission 1948–1949, sometimes referred to as the Radhakrishnan commission, was the first body formed after India gained its independence. This committee, which prioritised higher education, was run by Sarvepalli Radhakrishnan. The education that occurs after primary school but before university education began was the primary emphasis of the Secondary Education Commission in 1952–1953. The Education Commission, popularly known as the Kothari Commission, was run by Dr. D. S. Kothari from 1964 to 1966. This Commission used a comprehensive approach and

provided the government with advice on the national educational pattern and broad policies, taking into account every stage from primary through post-graduation. In order to achieve national integration and increased economic and cultural growth, the government launched The National Strategy on Education in 1968 based on the Kothari Commission's recommendations and a policy for equal educational opportunities. In order to equalise educational opportunity for all, the National Policy on Education of 1986 placed special focus on eliminating inequities in the educational system. In 1992, "Common Minimum Programme," a modification to this statute, was made with a focus on women, Scheduled Tribes (ST), and Schedule Castes (SC). Every kid now has a fundamental right to primary education according to the passage of the Right of Children to Free and Compulsory Education (RTE) Act in 2009. In 2016, the T.S.R. Subramanian Committee, also known as the Committee for Evolution of the New Education Policy, tried to overcome implementation flaws in order to raise the standard and credibility of education.

Finally, the Dr. K. Kasturirangan Committee was established to write the new National Education Policy, and on May 31, 2019, the committee turned in its final report. This proposal aimed to solve the problems with current education system's access, equity, quality, affordability, and accountability. The HRD ministry was renamed Ministry of Education by the committee.

### **Highlights of Policies NEP 2020 for Higher Education System: Policy changes:**

1. The Gross Enrolment Ratio in HE includes Vocational education will increase from current 26.3% (2018) to 50% by 2035.
2. HEIs which deliver the highest quality will get more incentives from the Government.
3. Reputed international universities to be encouraged to setup campuses in India.
4. Higher education institutions will promote multidisciplinary education and flexible curriculum structure that will offer multiple entry and exit points to create new possibilities for lifelong learning.
5. Greater focus on online education and open distance learning (ODL) as a key means to improve access equity and inclusion
6. Integration of vocational education within higher education. At least 50% of learners to have exposure to vocational education by 2025.
7. To draw in more international students, HE quality will be raised to a level of global quality, and credits earned abroad will contribute for awards. All students of allopathic medical education must have a fundamental understanding of Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homeopathy (AYUSH), and vice versa. This requires an integrated healthcare education system. Community medicine and preventative healthcare should receive more attention in all forms of healthcare education. Technical education ought to be provided in multidisciplinary educational settings and ought to emphasise chances for in-depth interaction with other disciplines. With applications to health, the environment, and sustainable living, the emphasis should be on providing artificial intelligence (AI), 3-D printing, big data analysis, and machine learning, in addition to genetic studies, biotechnology, nanotechnology, and neuroscience.

## OBJECTIVES

The study is made to fulfil the objectives mentioned below:

- a. To know the key highlights of NEP in relation to Higher Education
- b. To trace the history of Indian Education System and its present status.
- c. To analyse the impact of National Education Policy 2020 on Higher Education.

## METHODOLOGY

The methodology entails a conceptual debate on emphasising the main points of the framework for national educational policy and highlighting specific NEP 2020 policy sections related to the higher education system. The process of focus group discussions is used to determine the impact of NEP on higher education. Utilizing the predictive analysis technique, the opportunities and challenges of the new policy connected to higher education are examined.

## KEY TAKEAWAYS OF NEP 2020

The objective of this reformation of the Indian education system is “**No child will be left behind**”. It is intended to fill the gaps in the current education scenario. So, we can say, *NEP 2020 is brought for the ‘learning to learn’ approach.*

*Highlights of the new education policy:*

- The present school system will be divided into 5 + 3 + 3 + 4 stages as Foundation, Preparatory, Middle & Secondary respectively.
- Mother tongue or regional language will be taught up to at least class 5.
- Vocational education will be integrated from class 6 with 10 days of mandatory internship.
- National Testing Agency will conduct SAT-Like college entrance tests twice a year.
- Students will be benefitted with a 4-Year multi-disciplinary bachelor’s program.
- Mid-term drop-out students will be able to complete the degree after a break.
- Foreign colleges could enter India, and Indian universities would go global.

These will be some changes in the existing education policy to bring out the best in oneself, be it any field of study. It can surely make **India a global knowledge superpower.**

## NEP 2020: IMPACT ON HIGHER EDUCATION

1. Through a strong self-regulatory framework, the NEP 2020 sets the way for less regulation and more autonomy for institutions. In contrast to western institutions, which favour self-regulation, Indian educational institutions have long practised over-regulation. All higher education institutions will gradually be awarded autonomy and certification through NEP 2020.

2. It will be possible for foreign universities to establish campuses in India. It will encourage research and introduce adaptability. The universities from outside would promote programme and institution mobility. The concept of higher education internationalisation is founded on the transnational mobility of students, teachers, programmes, and institutions.
3. The NEP 2020 seeks to establish multidisciplinary universities that provide courses with top-notch instruction, research, and community involvement. Students will profit from this since they will have a wider range of options for studies across the humanities, sciences, sports, and other vocational fields. There will be more to it than just scholastic theory and study.
4. The new legislation emphasises online and e-learning. Education has always taken a more traditional, non-technological approach. The distance between students and institutions will be significantly closed through online education. What is currently supplementary in schooling will soon become essential. With the use of digital and video-centric technologies, the virtual world will surpass the physical world in realness.
5. The New Education Policy goes beyond academic credentials. Focusing on life skills and vocational education is key. It will be a student-centered approach where students can get the most out of their education and where there will be affordability and accessibility. Through open education, online learning, and open distance learning, more access, equity, and inclusion will be encouraged.

## **NEW EDUCATION POLICY 2020: ADVANTAGES & DISADVANTAGES**

The Indian educational system has recently undergone numerous modifications, from the elementary school to the college level. The Union Cabinet has approved a new national education policy that takes all the changes into account. This recently adopted plan discusses significant, much praised adjustments to the Indian academic system. Along with praise, there is also criticism that highlights the shortcomings of this new educational strategy. Following are the Advantages and Disadvantages of New Education Policy 2020.

### **Advantages:**

1. The Government aims to make schooling available to everyone with the help of NEP 2020.
2. Approximately two crore school students will be able to come back to educational institutes through this new approach.
3. According to the national education policy 2020, the 5+3+3+4 structure will replace the existing 10+2 structure. This structure is focused on student's formative years of learning. This 5+3+3+4 structure corresponds to ages from 3 to 8, 8 to 11, 11 to 14 and 14 to 18. 12 years of schooling, 3 years of Anganwadi and pre-schooling are included in this structure.
4. For children up to the age of 8, a National Curricular and Pedagogical Framework for Early Childhood Care and Education will be designed and developed by NCERT.

5. The Education Ministry is required to establish a National Mission on Foundational Literacy and Numeracy in accordance with the national education policy 2020. The states of India are responsible for ensuring that all pupils up through third grade have a solid foundation in reading and numeracy. By 2025, this implementation should be complete.
6. One of the merits of NEP 2020 is the formation of the National Book promotion Policy in India.
7. The third, fifth, and eighth grade exams will be administered by the appropriate authorities. Grades 10 and 12 board exams will still be given, but NEP 2020 wants to redesign the system to emphasise holistic development.
8. Parakh national education policy is to be set up by the Government.
9. Special daytime boarding school “Bal Bhavans” to be established in every state/ district in India. This boarding school will be used for participation in activities related to play, career, art.
10. An Academic Bank of Credit will be founded in accordance with the national education policy 2020. The credits that students have earned can be saved and counted toward the completion of the student's degree.
11. Multidisciplinary Education and Research Universities comparable to the IITs and IIMs will be established across the nation, according to the national education policy 2020. These will be organised to introduce transdisciplinary academic.
12. The same list of accreditation and regulation rules will be used for guiding both the public and private academic bodies.
13. Phased out college affiliation and autonomy will be granted to colleges.
14. By the year 2030, it will be mandatory to have at least four years B. Ed degree for joining the occupation of teaching.
15. For making the students prepared for future pandemic situations, online academic will be promoted on a larger scale.

### **Drawbacks:**

1. As a result of India's problematic teacher-to-student ratio and the difficulty of introducing mother tongues for each subject in academic institutions, language is seen negatively in the National Education Policy 2020. Finding qualified teachers can be difficult at times, and the NEP 2020's inclusion of study materials in mother tongues presents a new obstacle.
2. The national education strategy 2020 states that students who want to graduate must study for four years, although anyone can simply earn a diploma in two years. This can tempt the student to drop out midway through the course.
3. The national education policy 2020 states that children in private schools will begin learning English far earlier than students in government schools. The academic curriculum will be taught to government school students in their native regional tongues. One of the main



problems with the new educational policies is that more students would find it difficult to communicate in English, which will exacerbate the social divide.

**Impact of new NEP 2020 can be studied under the following headings:**

- *Large-scale consolidation will help in quality universities and colleges:*

The value volume of the country's higher education institutions will be significantly impacted by institutional restructuring and consolidation because it would reduce them by almost one third. The average number of students enrolled in a college in India is currently 693 (AISHE 18-19, Ministry of Human Resource Development, KPMG in India Analysis), despite the fact that the strategy seeks to establish higher education institutions with 3000+ students. To encourage excellence, this new policy concentrates on increasing the number of independent colleges. Out of the almost 40000 colleges in India, less than 1000 independent colleges are still operating. This demonstrates that the policy's limitation will result in numerous mergers and cooperation among higher education institutions in India. The aforementioned change is anticipated to reduce India's higher education sector from 50000 colleges to only 15,000 colleges.

- *Focus on multidisciplinary education:*

IIT, IIM, and AIIM are examples of single-disciplinary Islands of Excellence that define the Indian higher education system. The goal of the new national education policy is to create major multi-disciplinary universities known as multidisciplinary education and research universities (MERUs), similar to those found in the United States of America and the United Kingdom. By establishing MERUs, all societal groups will have access to high-quality education in a variety of fields, spanning both urban and rural areas of the nation. This will provide students a lot of flexibility in choosing their areas of interest.

- *Faculty shortage and need for improvement in faculty quality:*

The right to education act increased the instructor to student ratio in our country from 1:30 to 1:20, which is regarded as a healthy ratio. This modification will result in the system employing at least 500000 new academic members. In addition to addressing faculty shortage the quality of faculty also need to be addressed. By 2022, a set of national professional standards for teachers (NPST) will have been developed, and these standards will be used to determine tenure, ongoing professional development initiatives, salaries, promotions, and other recognitions for teachers, among other aspects of managing their careers. The policy also mentions developing performance criteria for instructors that explicitly define the function of the teacher at various levels of expertise and the necessary competencies at each step.

- *Catalysing Research Activities:*

The National Research Foundation (NRF), which the NEP has proposed, is likely to put a dedicated emphasis on high-quality research, as well as reduce research funding by making it more competitive and by increasing the effectiveness of funding procedures to have a more targeted approach to funding research initiatives. The students will be exposed to research activities from an early age.

- *Improving access and equity through Open Distance Learning (ODL) and online programmes:*

Around 40 lakh students, or 11% of all students enrolled in higher education in India, use ODL. The pandemic issue also contributes to ODL system improvement, which is expected to significantly increase in the upcoming years and assist double India's Gross Enrolment.

## **IMPACT OF NEP 2020 AND OPPORTUNITIES FOR STAKEHOLDERS**

The National Education Policy 2020 seeks to change the Indian educational system. By guaranteeing inclusive and equitable quality education and encouraging chances for lifelong learning for everyone in the coming ten years, the NEP is intended to put India on pace to meet Goal #4 of the 2030 agenda for sustainable development. Significantly, the strategy places attention on four critical reform areas, namely curriculum adjustments to develop strong fundamental abilities, enhancing learning quality at all educational levels, a change in assessment methods, and the necessity of systemic transformation.

## **CONCLUSION**

The 2030 Sustainable Development Goals and the needs of the 21st century are two goals that are aligned with the new national education policy 2020, which is a strong policy. The NEP is the result of a protracted process that aims to reach a gross enrolment ratio of 100 percent by 2030. The Ministry of Human Resource Development (MHRD) recently presented the national education strategy 2020 with the goal of building a more inclusive, cohesive, and productive society. In many ways, the policy's intention appears to be perfect, but the implementation is where the success rests. The NEP 2020's reforms are focused on developing students' 21st-century abilities, including as creativity, problem-solving, critical thinking, and digital literacy. The current education models need to be re-evaluated in light of the challenges of the global economy as technology improvements, fast globalisation, and unanticipated developments - such as the covid-19 pandemic - reshape the future of employment.

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# Remarkable Impact of NEP 2020 and accreditation on education

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## ABSTRACT:

The New Education Policy declared by Government of India (NEP 2020) was an inviting change and new news in the midst of the multitude of negativities encompassing the world because of the difficulties presented by Covid-19 pandemic. The declaration of NEP 2020 was simply surprising by quite a few people. The progressions that NEP 2020 has suggested were something that numerous educationists never saw coming. However the instruction strategy has affected school and school training similarly, this article fundamentally centers around NEP 2020 and its effect on Higher Education. This paper likewise frames the notable highlights of NEP and examinations what they mean for the current school system.

## INTRODUCTION:

The National Policy on Education (NPE) is a strategy formed by the Government of India to advance instruction among India's kin. The approach covers rudimentary training to universities in both provincial and metropolitan India. The main NPE was proclaimed by the Government of India by Prime Minister Indira Gandhi in 1968, the second by Prime Minister Rajiv Gandhi in 1986, and the third by Prime Minister Narendra Modi in 2020. The National Education Policy 2020 (NEP 2020), which was supported by the Union Cabinet of India on 29 July 2020, frames the vision of India's new schooling system. The new arrangement replaces the past National Policy on Education, 1986. The strategy is a thorough system for rudimentary schooling to advanced education as well as professional preparation in both country and metropolitan India. The approach plans to change India's school system by 2021. The language strategy in NEP is a wide rule and warning in nature; and it really depends on the states, organizations, and schools to settle on the execution. The NEP 2020 sanctions various changes in India's schooling strategy. It intends to increment state use on schooling from around 4% to 6% of the GDP quickly. In January 2015, a board under previous Cabinet Secretary T. S. R. Subramanian began the interview interaction for the New Education Policy. In light of the board report, in June 2017, the draft NEP was submitted in 2019 by a board drove by previous Indian Space Research Organization (ISRO) boss Krishnaswamy Kasturirangan. The Draft New Education Policy (DNEP) 2019, was subsequently delivered by Ministry of Human Resource Development, trailed by various public conferences. The Draft NEP had 484 pages. The Ministry embraced a thorough discussion process in planning the draft strategy: "More than two lakh ideas from 2.5 lakh gram panchayats, 6,600 blocks, 6,000 Urban Local Bodies (ULBs), 676 regions were gotten." The vision of the National Education Policy is: "Public Education Policy 2020 imagines an India-driven schooling system that contributes straightforwardly to changing our country reasonably into a fair and energetic information society by giving great training to all." Quality advanced education should expect to foster people who are magnificent, smart, balanced, and imaginative. It should empower an individual to concentrate on at least one specific areas of interest at a top to bottom level and foster person, moral and sacred qualities, scholarly interest, logical attitude, innovativeness, administration soul, and the abilities of the 21st hundred years across a scope of fields, including sciences, sociologies, artistic expression, humanities, dialects, individual, mechanical the professional subjects. The new training strategy carries a few major changes to the ebb and flow framework, and the key features are multidisciplinary colleges and schools, with no less than one in or close to each locale, redoing understudy educational programs, teaching method, assessment, and backing for improved understudy insight, laying out a National Research Foundation to help phenomenal companion checked on work and really seed learn at colleges and universities. The principal issues looked by the Indian advanced education framework incorporates authorized partition of capabilities, early specialization and understudy gushing into confined research regions, less spotlight on research all things considered colleges and schools, and absence of cutthroat companion investigated scholarly examination financing and enormous subsidiary colleges prompting low degrees of undergrad instruction.

Institutional rebuilding and union plan to end the fracture of advanced education by changing advanced education organizations into enormous multidisciplinary, making balanced and imaginative people, and changing different nations instructively and financially, expanding the gross enrolment proportion in advanced education, including professional preparation, from 26.3% (2018) to half by 2035. All-encompassing and multidisciplinary schooling ought to endeavour in a coordinated manner to further develop all human limits mental, social, social, physical, close to home, and moral. In the long haul, such a complete training will be the strategy for all undergrad programs, remembering those for clinical, specialized, and professional disciplines. Ideal learning conditions and backing for understudies offer an all-encompassing methodology including satisfactory educational plan, intelligent teaching method, reliable developmental evaluation, and sufficient help for understudies. Targets of the review The essential goal of this examination is to concentrate on the effect of New Education Policy 2020 on advanced education. The concentrate additionally frames the notable elements of NEP and investigations what they mean for the current school system. Research strategy This examination is an expressive report. The important optional information was gathered from different sites including those of Government of India, magazines, diaries, different distributions, and so forth. This information was then broke down and evaluated to come to the derivations and end results.

### **REMARKABLE FEATURES OF NEP RELATED TO HIGHER EDUCATION:**

The new NEP has been acquainted with a point with formalize changes in the framework from school level to school/college level. Remembering the creating situation, instruction content consequently, will zero in on key-ideas, thoughts, applications and critical thinking points. The National Education Policy is supposed to welcome positive and dependable effect on the advanced education arrangement of the country. The way that unfamiliar colleges will be permitted to open grounds in India is an estimable drive by the public authority. This will assist the understudies with encountering the worldwide nature of training in their own personal country. The strategy of presenting multi-disciplinary organizations will prompt a restored centre around each field, for example, expressions, humanities and this type of instruction will assist understudies with learning and develop comprehensively. Accordingly, understudies will be furnished with more grounded information base.

The presentation of single normal entry test is another positive step which will decrease the pressure of different cutthroat tests and dial down the strain of planning for so many of them. It will likewise guarantee a level playing ground for all understudy candidates proceeding. Laying out Academic Bank of Credit (ABC) is certainly a powerful plan to store the scholastic credits that understudies procure by taking courses from different perceived advanced education foundations. An understudy can procure scores by following through with a tasks and these will be credited to the ABC account. One can then move these credits if he/she chooses to switch universities. In the event that an understudy at any point exits for certain reasons, these credits will stay in one piece which implies he/she can return years after the fact and get from where the understudy had left. The new advanced education administrative design will guarantee that particular managerial, authorization, funding, and scholastic standard-setting jobs are performed by discrete, independent, and engaged bodies. These four designs will be laid out as four free verticals inside a solitary umbrella establishment, India's Higher Education Commission (HECI). There are a ton of changes and new improvements which have been presented by NEP in the advanced education area. A portion of the notable elements are:

- Single administrative body for advanced education: The NEP expects to lay out Higher Education Commission of India which will be the single administrative body with the exception of lawful and clinical instruction.
- Multiple passage and leave program: There will be different section and leave choices for the people who wish to leave the course in the centre. Their credits will be moved through Academic Bank of Credits.

- Tech-based choice for grown-up learning through applications, TV stations: Quality innovation based choices for grown-up learning, for example, applications, online courses/modules, satellite-based TV stations, online books, and ICT-prepared libraries and Adult Education Centers, and so on will be created.
- E-courses to be accessible in provincial dialects: Technology will be important for instruction arranging, educating, learning, appraisal, instructor, school, and understudy preparing. The e-content to be accessible in local dialects, beginning with 8 significant dialects - Kannada, Odia, Bengali among others to join the e-courses accessible in Hindi and English.
- Unfamiliar colleges to set-up grounds in India: World's main 100 unfamiliar colleges will be worked with to work in India through another regulation. As per the HRD Ministry record, "such (unfamiliar) colleges will be given extraordinary allotment in regards to administrative, administration, and content standards comparable to other independent organizations of India."
- Normal placement test for all schools: The normal Entrance test for all advanced education foundations to be held by National Testing Agency (NTA). The test will be discretionary.
- A Higher Education Council of India (HECI) will be set up to direct advanced education. The gathering's objective will be to increment gross enlistment proportion. The HECI will have 4 verticals:
  - a) National Higher Education Regulatory Council (NHERC), to manage advanced education, including educator training, while at the same time barring clinical and lawful schooling.
  - b) National Accreditation Council (NAC), a "meta-certifying body".
  - c) Higher Education Grants Council (HEGC), for subsidizing and funding of colleges and schools. This will swap the current National Council for Teacher Education, All India Council for Technical Education and the University Grants Commission.
  - d) General Education Council (GEC), to outline "graduate credits", specifically the learning results anticipated. It will likewise be mindful in outlining a National Higher Education Qualification Framework (NHEQF). The National Council for Teacher Education will go under the GEC, as an expert standard setting body (PSSB).

### **NETTY GRITTY ANALYSIS OF IMPACT OF NEP ON HIGHER EDUCATION:**

**Regulatory System of Higher Education:** A huge change in NEP 2020 is the proposition to set up the Higher Education Commission of India (HECI), as an umbrella body for advanced education, barring clinical and lawful schooling. This will typically draw out an inquiry that what will befall the present UGC and AICTE? HECI is targeting improving the advanced education area; the Bill will isolate the Academic and Funding parts of the area. As per the new Bill, HECI won't have any monetary abilities. The financing processes which were dealt with by the University Grants Commission (UGC) will be taken consideration by the Ministry of Education, recently known as the Ministry of Human Resource Development (MHRD). This change anyway is supposed to clear the administrative wreck in India's Higher Education framework. HECI is supposed to have four free verticals - National Higher Education Regulatory Council (NHERC) for guideline, General Education Council (GEC) for standard-setting, Higher Education Grants Council (HEGC) for subsidizing, and National Accreditation Council (NAC) for certification. To have consistency in schooling principles, a solitary umbrella body was consistently a necessity and this has been a dream of various educationists. This is considered as the right move toward smoothing out schooling strategy. In any case, to guarantee nature of advanced education, establishments should be estimated in view of significant boundaries like exploration, industry linkages, arrangements and scholastic greatness, and so forth. On the off chance that the HECI can deal with this, the advantages to its greatest partner, the young people of India, may be critical.

**Reviewed Accreditation and Graded Autonomy:** The idea of "strengthening and independence to improve" is one of the critical elements in NEP 2020 which upholds a "eliminating" technique from Affiliated Colleges to Autonomous Institutions. The expanded adaptability proposed to independent establishments additionally

gives trust in educational program advancement. It additionally expresses that with proper licenses, Autonomous degree-giving Colleges could advance into Research-concentrated or Teaching-escalated Universities, assuming they so aim. The declaration of setting up Multidisciplinary Education and Research Universities (MERUs) in the nation gives more expectation. These foundations will be at standard with the current IITs and IIMs and will intend to exhibit multidisciplinary training for the Indian understudies. Another significant change the NEP 2020 recommends that the National Testing Agency will act as a head, master, independent testing association to direct selection tests for undergrad and graduate confirmations and cooperation's in Higher Education Institutions. The top notch, reach, and adaptability of the NTA testing administrations will empower most colleges to utilize these normal selection tests - as opposed to having many colleges each concocting their own placement tests - subsequently radically diminishing the weight on understudies, colleges and schools, and the whole schooling system. It will be surrendered to individual colleges and schools to involve NTA evaluations for their affirmations. It additionally clearly assists the understudies with effectively moving their certifications and credits to colleges abroad.

Internationalization at home: NEP 2020 likewise permits unfamiliar colleges and universities to come to India and this draws out really difficult for the local establishments to work on the nature of instruction given by them. The Indian advanced education area is humming overall around as the chance of making ready for unfamiliar colleges to set up grounds in the country. India has one of the biggest organizations of advanced education frameworks on the planet, with in excess of 900 colleges and 40,000 schools. Yet, GER (Gross Enrolment Ratio) of India in advanced education is 26.3%, which is fundamentally low when contrasted with other BRICS nations like Brazil (half) or China (51%), and particularly lower when contrasted and European and North American countries which would be over 80%. India should accomplish a huge development in the space of worldwide advanced education for getting a practical financial development, which ought not be driven by regular assets, however by information assets. According to the reports, India will require one more in excess of 1,500 new advanced education establishments by 2030 to oblige a tremendous inflow of understudies, that is the reason the Indian government needs to advance FDIs (Foreign Direct Investment) and open up the ECB (External Commercial Borrowing) course to reinforce the capital speculation for the training area. The service is additionally attempting to support India's picture as a schooling place since currently in excess of 7 Lakhs of Indian understudies are concentrating abroad. Thus, the expectation of this strategy is that, permitting unfamiliar colleges will empower top notch training accessible locally at an essentially lower cost without voyaging and will impressively decrease the human resources relocating to different nations for study and occupation possibilities. As per the different worldwide overviews, cross-line instruction is gainful for the economy and brings a more extensive degree of worldwide mindfulness, socially insightful, and intensity. Unfamiliar coordinated efforts empower neighbourhood establishments to plan their educational program in arrangement with worldwide teaching method and proposition a different arrangement of subjects and specialization to understudies. More Holistic and Multidisciplinary Education: The NEP 2020 cases that, a comprehensive and multidisciplinary training would plan to foster all limits of people - scholarly, tasteful, social, physical, profound, and moral in a coordinated way. Such a training will assist with growing balanced people that have basic 21st century limits in fields across human expression, humanities, dialects, sciences, sociologies, and expert, specialized, and professional fields; an ethic of social commitment; delicate abilities, like correspondence, conversation and discussion; and thorough specialization in a picked field or fields. The NEP 2020 imagines one huge multidisciplinary Higher Education Institution (HEI) in or close to each locale, by 2030. Towards the fulfilment of such an all-encompassing and multidisciplinary schooling, the adaptable and creative educational programs of all HEIs will incorporate credit-based courses and undertakings in the space of local area commitment and administration, ecological training, and worth based training. Climate instruction will incorporate regions, for example, environmental change, contamination, squander the executives, disinfection, preservation of organic variety, the board of natural assets and biodiversity, timberland and untamed life protection, and supportable turn of events and living. Esteem based schooling will incorporate the improvement of humanistic, moral, Constitutional, and general human upsides of truth (Satya), exemplary lead (dharma), harmony (shanti), love (prem), peacefulness (ahimsa), logical attitude,

citizenship values, and furthermore fundamental abilities; illustrations in seva/administration and cooperation in local area administration projects will be viewed as an essential piece of all-encompassing training.

As the world is turning out to be progressively interconnected, Global Citizenship Education (GCED), a reaction to contemporary worldwide difficulties, will be given to enable students to become mindful of and grasp worldwide issues and to become dynamic advertisers of more tranquil, lenient, comprehensive, secure, and supportable social orders. At long last, as a component of all-encompassing training, understudies at all HEIs will be furnished with potential open doors for temporary positions with neighbourhood industry, organizations, specialists, creates people, and so on, as well as examination entry level positions with staff and scientists at their own or other HEIs/research establishments, so understudies may effectively draw in with the useful side of their learning and, as a result, further work on their employability.

The construction and lengths of degree programs: with regards to the National Education Policy 2020 plan, any college degree in any establishment will be of term of three or four years. One can leave the degree inside this period. Any instructive foundation should provide for the understudy a confirmation degree after the understudy finishes two years of study, a certification after the understudy finishes three years of study and a declaration to those understudies who complete one year of concentrate in any expert or professional course of their decision. The Government of India will likewise help in laying out an Academic Bank of Credit for putting away the scholastic scores carefully. This will empower the establishments to count the credit toward the end and put it in the level of the understudy. This will be useful for those people who could need to leave the course mid-way. They can begin the course later on from the last known point of interest and not start from the outset indeed. Despite the fact that NEP 2020 says that Higher schooling establishments will be given the opportunity to begin PG courses there might be some trouble in planning One Year PG Degree for understudies who have finished 4 Year UG Degree and a Two Year PG Degree for understudies who have finished 3 Year UG Degree.

## **CONCLUSION:**

The strategy presents an entire range of changes and peruses generally as an exceptionally moderate report, with a strong handle on the current financial scene and the possibility of future vulnerability. Training for another age of students needs to basically draw in with the rising dematerialisation and digitalisation of economies, which requires a totally new arrangement of capacities to have the option to keep up. This is by all accounts a considerably more fundamental perquisite now, with the pattern towards digitalisation and problematic mechanization being revived by the pandemic. Generally, the NEP 2020 addresses the need to foster experts in different fields going from Agriculture to Artificial Intelligence. India should be prepared for what's in store. What's more, the NEP 2020 prepares ahead for the vast majority youthful hopeful understudies to be outfitted with the right range of abilities. The new training strategy has an excellent vision, yet its solidarity will rely upon whether it can successfully coordinate with the other arrangement drives of government like Digital India, Skill India and the New Industrial Policy to give some examples, to impact an intelligible underlying change. Consequently, strategy linkages can guarantee that schooling strategy locations to and gains from Skill India's involvement with connecting all the more progressively with the corporate area to shape professional training educational program to make it a triumph. There is likewise a need for more proof based independent direction, to adjust to quickly developing changes and interruptions. NEP has reassuringly provisioned for ongoing assessment frameworks and a consultative observing and survey system. This will engage the schooling system to continually change itself, rather than expecting for another training strategy consistently for a change in educational program. This, in itself, will be an exceptional accomplishment. The NEP 2020 is a pivotal turning point for advanced education. Successful and time-bound execution will make it genuinely way breaking.

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# **Digital marketing post NEP and a comparison of consumer attitude towards digital app with special reference to Blinkit, Grofers and others**

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**Abstract**-India has seen a surge in the growth of digital marketing, people who once surpassed and ignored digital marketing for their business/brand have now understood why online presence matters. In today's digital era each and everyone irrespective of their gender, age, or location, want to learn digital mark

Learning digital marketing will give the various job opportunities! It helps to know about the ongoing market, the search engine optimization skills, the social media marketing platforms like Facebook, Instagram which is in fact loved by them a lot, and also website designing and development.

This gives a holistic development to the children and lets them explore the horizon of opportunities. Yes, with the new education policy, the students have a lot of time to find the person inside them, and learning is the best way.

The present paper is going to discuss about consumer preference towards these app for inline shopping. And demand for digital marketing coursepost NEP.

## **Introduction**

With India going digital, there arrives every single possibility to light up a digital marketer's career in coming years especially after introduction of New education policy. Bigger budgets, increased pay and more career choices are just some of the benefits digital marketing professionals are looking forward to have in the year and beyond. In fact, digital marketing is one of only a handful couple of industries where you can climb up the job ladder quickly.

Food is a fundamental need of individuals. We overall buy food in our everyday presence to meet food necessities. In the present rapidly creating world, we all in all are found scraping by. Hence, we in general incline in the direction of buying things online these days.

The staple Delivery application is one of those on-demand moving applications which is as a rule used to orchestrate essential food things on the web. The top staple Delivery application saves your time via conveying your food to your home so to speak.

There are various Grocery Delivery App Development Company that gives Grocery Delivery App. Most of the Grocery Delivery App plans goes under cream App Development and Native App Development. If the application is for android clients just, it goes under Android App Development.

## **Objectives of the study**

The objectives of this study are:

- To understand the consumers perception on food apps.

- Two concentrate on the client's degree of fulfilment with respect to Internet shopping.
- To analyse the factors that influences consumer perception towards food apps.
- To look at whether clients favour Internet shopping or actual stores.
- To understand the competition between various apps.

## Top grocery delivery apps in India

**BIGBASKET:** Bigbasket was co-founded by Mr. Hari Menon, VS Sudhakar, Vipul Parekh, Abhinay Choudhary, and V S Ramesh in December 2011, with the idea of creating one of the optimum online grocery apps. Bengaluru is the headquarters of BigBasket, which has expanded its business in more than 25 cities. BigBasket has more than 18,000 products from 1000+ brands. It has a PAN-India presence and a customer base of 6 million, making it the most extensive online grocery delivery app in India. BigBasket saw an increase in 84% of the customers and a more than 100% rise during the COVID-19 pandemic lockdown. The impressive features of BigBasket are a wide range of products, attractive offers and discounts, best quality products, on-time delivery, simple search selections, and search option in vernacular languages.

**Blinkit (formerly Grofers):** Grofers is one of the leading grocery delivery apps in India. It has its headquarters in Gurugram and was founded by Saurabh Kumar and Albinder Dhindsa in December 2013. It functions in 29 cities and offers fresh fruits and vegetables, sweets, snacks, pet care products, bakery products, etc. Most of the products of Grofers belong to its in-house brands: Grofers Mothers choice, Havemore, G Fresh, Grofers Happy Day, O'range, and budget brands Savemore and Grofers Happy Home.

Grofers has raised in excess of \$600 Million in funding till date. According to a recent [report](#), Grofers may see a rise of 30,000 crores in its GMV (gross merchandise value) by 2022. One of the company's officials said that every month the company is adding one or more cities to achieve its target of reaching more than 50 cities by 2021.

**AMAZON PANTRY:** Amazon Pantry is a feature of eCommerce giant Amazon. It is a delivery service for groceries and other household items. It offers free shipping to Amazon prime members. Amazon Pantry helps Amazon to compete with other online grocery delivery stores. In India, Amazon Pantry is available across more than 300 cities. It first started its service in Hyderabad in 2016. Users can browse the Pantry section through the Amazon app. Orders are delivered within 1-4 business days.

**FLIPKART SUPERMARKET:** On July 2nd, 2011, Sachin and Binny Bansal founded Flipkart. It's headquartered in Bengaluru and registered in Singapore. Flipkart also has a 'Supermart,' an online grocery store offering fresh and affordable groceries to online customers. Flipkart Supermarket is operational in metropolitan cities such as Mumbai, Bangalore, and Hyderabad. On Flipkart Supermarket, a consumer can connect with a voice assistant to place their order. Easy payment options are available for the users such as COD, Flipkart Pay Later, debit card, net banking, Cardless Credit. Both Android and iOS users can use this service.

**DUNZO:** Dunzo is an Indian grocery app funded by Google and founded by Kabeer Biswas, Ankur Agarwal, Dalvir Suri, and Mukund Jha in July 2014. The app currently serves in 8 cities, Jaipur, Chennai, Delhi, Gurugram, Bengaluru, Hyderabad, Mumbai, Pune. Its headquarters is in Indiranagar, Bengaluru. Dunzo also offers a Bike Taxi Service to its customers in Gurugram. It receives more than 10 lakh orders in a month. Dunzo has raised more than \$120 Million in funding till date.

## Benefits of online grocery shopping

- It saves time.
- No unwanted luxury purchases.

- Correlation.
- Find everything you need

### **Limitations of online grocery shopping**

- You Can't Personally Look at Items
- Conveyance can be a test.
- Cost.

### **Research methodology**

The research to find out the answers to these objectives was totally a primary research through online survey. People from different cities were provided questionnaires through online mode which they were asked to fill from best of their knowledge.

### **SAMPLE SIZE & METHOD OF SELECTING SIZE**

Sampling: - sampling is a procedure of obtaining a sample which is a small number or mass of individuals for the purpose of representation of entire population.

The analysis is done by random sampling where the questionnaires sent to the people in order to find out the answers of the objectives of the study.

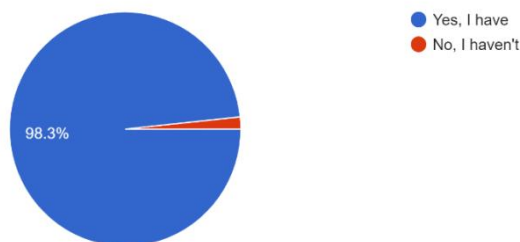
Sample size: - 60 individuals as respondents are belonging to several categories like salaried or professional, businessmen and student etc.

Form of Questionnaire: - The questionnaire was closed ended with the provision of choices and the interviewed people had to answer from the choices only.

### **DATA ANALYSIS**

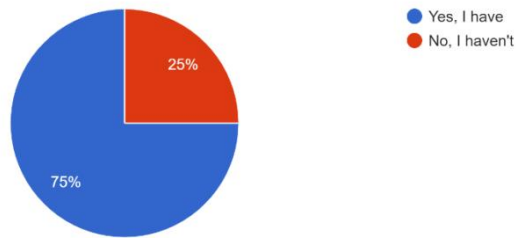
1. Have you ever heard of online grocery shopping?

60 responses



2. Have you ever tried online grocery shopping?

60 responses



3. If you never had online grocery shopping, please specify the reason.

Ans-

Due to unavailability of delivery in my city.

I have used it already,

I think the quality might differ or it may not be good enough

Unavailable

NA

No

It saves time

Sorry.. But I didn't

Just never really thought about it

I do not feel it safe..safe in the sense they might deliver the used product

No reason

Convenient

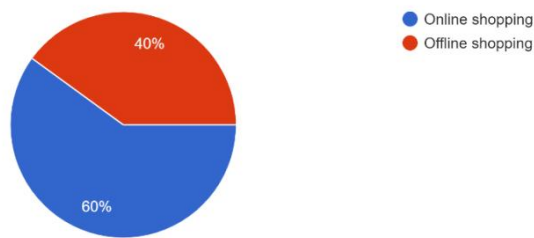
Trust issue on product

I have never tried it because of the thought that how the vegetables and d fruits will be fresh and moreover, online grocery shopping facility is not available in every city.

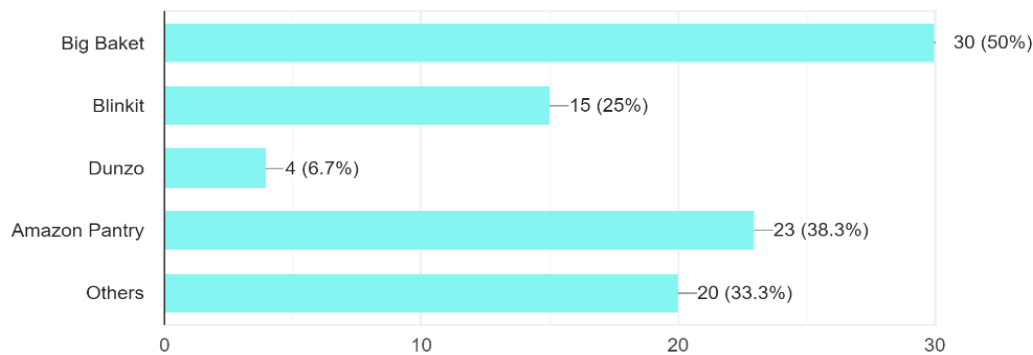
Due to unavailability

Unavailable

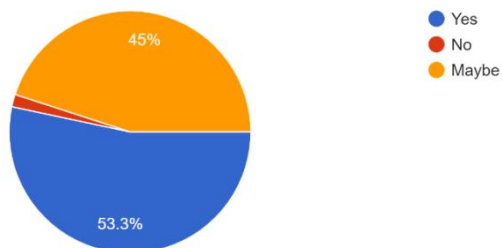
4. If given a choice, what would you prefer?  
60 responses



5. Which apps would you choose for grocery shopping?  
60 responses

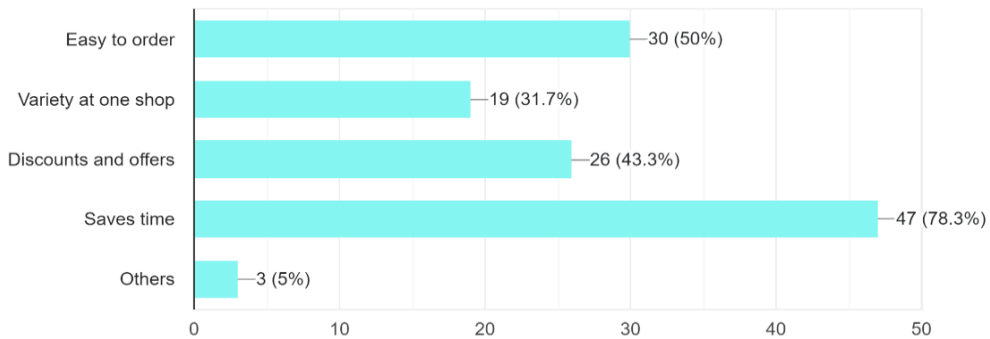


6. Do you think online grocery shopping is beneficial?  
60 responses



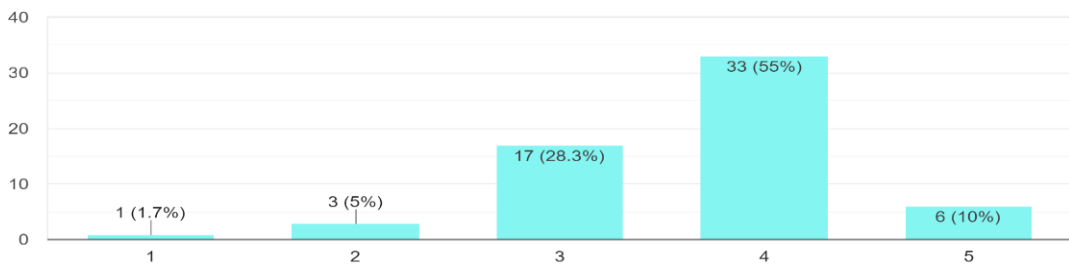
### 7. If yes, why do you think online grocery shopping is beneficial?

60 responses



### If measured between a 1-5 scale, how satisfied are you with these apps?

60 responses



## INTERPRETATION

According to the responses, out of 98.3% of the people who have heard about the online grocery shopping, 75% have actually it.

60% of the people prefers online grocery shopping over offline shopping. The main reason of the people for not using these apps was the unavailability at their places. Other reasons include trust issues, or bad experience etc.

Out of all the apps, the Big Basket was the most preferred by the people after the amazon pantry and others.

53.3% of the people finds online grocery delivery apps quite helpful but, 45% of the people still doubt if it can be of help or not.

Talking about the satisfaction level, most of the people are satisfied with these apps.

## Conclusion

There is a great market potential for the startups of online grocery delivery. Though, many people haven't tried online grocery shopping due to unavailability of them at their places. It will take some time for these companies to grow and setup in every city possible.

A research was done to find know the views of the consumers towards grocery delivery apps and to find out the answers to the objectives. From the responses of the consumers, it could be found out that the people hesitate to order online because of the lack of trust. They think that they might be delivered the wrong product or the used product or the product might not be fresh and many other reasons are there.

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# Data Analysis with R and Python

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## Abstract

Data Science and Artificial Intelligence are the ones leading this from the front. These two things are giving life to things that we haven't imagined would be true. If you're aware of this world, then you are also aware of the two programming languages that are always a matter of interest and debate. R and Python are programming languages and both these languages are similar in few ways.

R and Python are both open-source programming languages with a large community. New libraries or tools are added continuously to their respective catalog. R is mainly used for statistical analysis while Python provides a more general approach to data science.

R and Python are state of the art in terms of programming language oriented towards data science. Learning both of them is, of course, the ideal solution. R and Python requires a time-investment, and such luxury is not available for everyone. Python is a general-purpose language with a readable syntax. R, however, is built by statisticians and encompasses their specific language.

## 1. Introduction

"Data science" as a scientific term was initially proposed about 15 years ago, and has since increasingly attracted attention and debate within statistics, analytics, computing, social science, and other scientific domains and disciplines. Although arguments have emerged from different communities such as, "How and why is data science different from statistics?" and "Why do we need data science when for decades we have had information science?", it is undoubtedly a fact that data science is driving a new era of data-driven thinking, research, practice and education which goes far beyond the breadth and depth of previous efforts.

In this data-intensive universe, data is a critical asset, and data science is the interdisciplinary core that drives new research, education and economy in many diverse areas. Although different definitions and interpretations exist, data science, as a scientific field, develops relevant methodologies, theories, technologies and applications for data, ranging from data capture, creation, representation, storage, search, sharing, privacy, security, modeling, analysis, learning, presentation and visualization, to integration across heterogeneous, interdependent complex resources for real-time decision-making, collaboration, value creation, and decision-support. The field encompasses the larger areas of statistics, data analytics, machine learning, big data management, and other disciplines, including complex systems, communications, social science, decision science, and management science.

Data analytics and science has emerged as an important paradigm for driving the new economy and domains such as the Internet of Things, social and mobile networks, and cloud computing, and reforming classic disciplines such as telecommunications, biology, health and social science, as well as upgrading core business and economic activity. Data-driven scientific discovery, innovation and practice have become essential for gleaning understanding from large data sets and converting data into actionable intelligence, whether it is data available to enterprises and governments, or on the Web.

In recent years, various initiatives have been created by government, business and professional organizations to promote the development of big data, data science and analytics, such as the provision of funding support from national science foundations for big data research, the IEEE Task Force on Data Science and Advanced Analytics, the IEEE Conference on Data Science and Advanced Analytics, and new courses on data science and analytics.

The Journal of Data Science and Analytics (JDSA) was launched to specifically strengthen scientific innovation and practical development in this new era of data and analytics. JDSA aims to be a prestigious publishing venue in the data science and analytics field for the exchange of new theoretical and experimental designs, solid findings and insights, best practices and applications to real-life situations, and reviews of new opportunities and frameworks for data science and analytics. JDSA is the ideal venue for synergizing important innovations, major impacts, and significant contributions in data science and advanced analytics from

diverse domains and disciplines for the advancement of interpretation, management, and usage of data intelligence. As the first scientific journal dedicated to data science and analytics science, JDSA will publish original, fundamental and applied research outcomes in data and analytics theories, technologies and applications, and will promote new scientific and technological approaches to strategic value creation in data-rich applications. Topics of relevance will include all aspects of the scientific foundations, techniques, and applications of data and analytics, especially new statistical and mathematical theories and techniques, data characteristics and complexity understanding, as well as theories on, and means to achieve, the synthesis and meta-synthesis of ubiquitous intelligence, including data intelligence, domain intelligence, business intelligence, organizational intelligence, social intelligence, behaviour intelligence, human intelligence, and network intelligence. JDSA particularly welcomes comprehensive surveys and reviews of all aspects of data science and analytics, together with position papers on the trends and controversies within data science and analytics science

## 2. Data Science

data science combines multiple fields, including statistics, scientific methods, artificial intelligence (AI), and data analysis, to extract value from data. It encompasses preparing data for analysis, including cleansing, aggregating, and manipulating the data to perform advanced data analysis.

Data science is applicable in different industries, and it's helping to solve problems and discover more about the universe. In the health industry, data science helps doctors to make use of past data in making decisions, for example, diagnosis, or the right treatment for a disease. The education sector is not left out, you can now predict students dropping out of school, all thanks to data science.

Data analysis is a process of inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, and is used in different business, science, and social science domains. In today's business world, data analysis plays a role in making decisions more scientific and helping businesses operate more effectively. Data mining is a particular data analysis technique that focuses on statistical modelling and knowledge discovery for predictive rather than purely descriptive purposes, while business intelligence covers data analysis that relies heavily on aggregation, focusing mainly on business information.

# Data analysis process

As the data available to companies continues to grow both in amount and complexity, so too does the need for an effective and efficient process by which to harness the value of that data. The analysis method typically moves through several iterative phases. Let's take a closer look at each.

**Identify** the business question you'd like to answer. What problem is the company trying to solve? What do you need to measure, and how will you measure it?

**Collect** the raw data sets you'll need to help you answer the identified question. Data collection might come from internal sources, like a company's client relationship management (CRM) software, or from secondary sources, like government records or social media application programming interfaces (APIs).

**Clean** the data to prepare it for analysis. This often involves purging duplicate and anomalous data, reconciling inconsistencies, standardizing data structure and format, and dealing with white spaces and other syntax errors.

**Analyze** the data. By manipulating the data using various data analysis tools and techniques, you can begin to find trends, correlations, outliers, and variations that begin to tell a story. During this stage, you might use data mining to discover patterns within databases or data visualization software to help transform data into an easy-to-understand graphical format.

**Interpret** the results of your analysis to see how well the data answered your original question. What recommendations can you make based on the data? What are the limitations to your conclusions?

# Types of data analysis

Data can be used to answer questions and support decisions in several different ways. It can help to group these types of analysis into four categories commonly used in the field. We'll take a look at each of these data analysis methods, along with an example of

how each might be applied in the real world.

**Descriptive analysis** (answers the question, “what happened?”): Descriptive analysis tells us what happened. This type of analysis helps describe or summarize quantitative data by presenting statistics. For example, descriptive statistical analysis could show the distribution of sales across a group of employees and the average sales figure per employee.

**Diagnostic analysis** (answers the question, “why did it happen?”): If the descriptive analysis determines the “what,” diagnostic analysis determines the “why.” Let’s say a descriptive analysis shows an unusual influx of patients in a hospital. Drilling into the data further might reveal that many of these patients shared symptoms of a particular virus. This diagnostic analysis can help you determine that an infectious agent—the “why”—led to the influx of patients.

**Predictive analysis** (answers the question, “what might happen in the future?”): So far, we’ve looked at types of analysis that examine and draw conclusions about the past. Predictive analytics uses data to form projections about the future. Using predictive analysis, you might notice that a given product has had its best sales during the months of September and October each year, leading you to predict a similar high point during the upcoming year.

**Prescriptive analysis** (answers the question, “what should we do about it?”): Prescriptive analysis takes all the insights gathered from the first three types of analysis and uses them to form recommendations for how a company should act. Using our previous example, this type of analysis might suggest a market plan to build on the success of the high sales months and harness new growth opportunities in the slower months.

## Tools for Data Analysis

**Microsoft Power BI** is a top business intelligence platform with support for dozens of data sources. It allows users to create and share reports, visualizations, and dashboards. Users can combine a group of dashboards and reports into a Power BI app for simple distribution. Power BI also allows users to build automated machine learning models and integrates with Azure Machine Learning.

**SAP BusinessObjects** provides a suite of business intelligence applications for data discovery, analysis, and reporting. The tools are aimed at less technical business users, but they’re also capable of performing complex analysis. BusinessObjects integrates with Microsoft Office products, allowing business analysts to quickly go back and forth between applications such as Excel and BusinessObjects reports. It also allows for self-service predictive analytics.

**Sisense** is a data analytics platform aimed at helping both technical developers and business analysts process and visualize all of their business data. It boasts a large collection of drag-and-drop tools and provides interactive dashboards for collaboration. A unique aspect of the Sisense platform is its custom In-Chip technology, which optimizes computation to utilize CPU caching rather than slower RAM. For some workflows, this can lead to 10–100x faster computation.

**TIBCO Spotfire** is a data analytics platform that provides natural language search and AI-powered data insights. It’s a comprehensive visualization tool that can publish reports to both mobile and desktop applications. Spotfire also provides point-and-click tools for building predictive analytics models.

**Thoughtspot** is an analytics platform that allows users to explore data from various types of sources through reports and natural language searches. Its AI system, SpotIQ, finds insights automatically to help users uncover patterns they didn’t know to look for. The platform also allows users to automatically join tables from different data sources to help break down data silos.

**Qlik** provides a self-service data analytics and business intelligence platform that supports both cloud and on-premises deployment. The tool boasts strong support for data exploration and discovery by technical and nontechnical users alike. Qlik supports many types of charts that users can customize with both embedded SQL and drag-and-drop modules.

**SAS Business Intelligence** provides a suite of applications for self-service analytics. It has many built-in collaboration features, such as the ability to push reports to mobile applications. While SAS Business Intelligence is a comprehensive and flexible platform, it can be more expensive than some of its competitors. Larger enterprises may find it worth the price due to its versatility.

**Tableau** is a data visualization and analytics platform that allows users to create reports and share them across desktop and mobile platforms, within a browser, or embedded in an application. It can run on the cloud or on-premises. Much of the Tableau platform runs on top of its core query language, VizQL. This translates drag-and-drop dashboard and visualization components into efficient back-end queries and minimizes the need for end-user performance optimizations. However, Tableau lacks support for advanced SQL queries.

**Google Data Studio** is a free dashboarding and data visualization tool that automatically integrates with most other Google applications, such as Google Analytics, Google Ads, and Google BigQuery. Thanks to its integration with other Google services, Data Studio is great for those who need to analyze their Google data. For instance, marketers can build dashboards for their Google Ads and Analytics data to better understand customer conversion and retention. Data Studio can work with data from a variety of other sources as well, provided that the data is first replicated to BigQuery using a data pipeline like Stitch.

**Redash** is a lightweight and cost-effective tool for querying data sources and building visualizations. The code is open source, and an affordable hosted version is available for organizations that want to get started fast. The core of Redash is the query

editor, which provides a simple interface for writing queries, exploring schemas, and managing integrations. Query results are cached within Redash and users can schedule updates to run automatically.

**Periscope Data** — now owned by Sisense — is a business intelligence platform that supports integrations for a variety of popular data warehouses and databases. Technical analysts can transform data using SQL, Python, or R, and less technical users can easily create and share dashboards. Periscope Data also boasts a number of security certifications, such as HIPAA-HITECH.

**Metabase** is a free, open-source analytics and business intelligence tool. Metabase allows users to "ask questions" about data, which is a way for nontechnical users to use a point-and-click interface for query construction. This works well for simple filtering and aggregations; more technical users can go straight to raw SQL for more complex analysis. Metabase also has the ability to push analytics results to external systems like Slack.

**Jupyter Notebook** is a free, open-source web application that can be run in a browser or on desktop platforms after installation using the Anaconda platform or Python's package manager, pip. It allows developers to create reports with data and visualizations from live code. The system supports more than 40 programming languages. Jupyter Notebook — formerly IPython Notebook — was originally programmed using Python, and allows developers to make use of the wide range of Python packages for analytics and visualizations. The tool has a wide developer community using other languages as well.

**IBM Cognos** is a business intelligence platform that features built-in AI tools to reveal insights hidden in data and explain them in plain English. Cognos also has automated data preparation tools to automatically cleanse and aggregate data sources, which allows for quickly integrating and experimenting with data sources for analysis.

**Chartio** is a self-service business intelligence system that integrates with various data warehouses and allows for easy import of files such as spreadsheets. Chartio has a unique visual representation of SQL that allows for point-and-click construction of queries, which lets business analysts who aren't familiar with SQL syntax modify and experiment with queries without having to dig into the language.

**Mode** is an analytics platform focused on giving data scientists an easy and iterative environment. It provides an interactive SQL editor and notebook environment for analysis, along with visualization and collaboration tools for less technical users. Mode has a unique data engine called Helix that streams data from external databases and stores it in memory to allow for fast and interactive analysis. It supports in-memory analysis of up to 10GB of data.

**KNIME** — short for the Konstanz Information Miner — is a free, open source data analytics platform that supports data integration, processing, visualization, and reporting. It plugs in machine learning and data mining libraries with minimal or no programming requirements. KNIME is great for data scientists who need to integrate and process data for machine learning and other statistical models but don't necessarily have strong programming skills. The graphical interface allows for point-and-click analysis and modeling.

**Looker** is a cloud-based business intelligence and data analytics platform. It features automatic data model generation that scans data schemas and infers relationships between tables and data sources. Data engineers can modify the generated models through a built-in code editor.

**RapidMiner** provides all the technology users need to integrate, clean, and transform data before they run predictive analytics and statistical models. Users can perform nearly all of this through a simple graphical interface. RapidMiner can also be extended using R and Python scripts, and numerous third-party plugins are available through the company's marketplace. However, the product is heavily optimized for its graphical interface so that analysts can prepare data and run models on their own.

**Domo** provides more than 1,000 built-in integrations — called connectors — that allow users to transfer data to and from on-premises and cloud external systems. Domo also supports building custom apps that integrate with the platform, which allows developers to extend the system with immediate access to the connectors and visualization tools. Domo comes as a single platform that includes a data warehouse and ETL software, so businesses that already have their own data warehouse and data pipeline set up may want to look elsewhere.

**Oracle Analytics Cloud** is a suite of cloud business intelligence and analytics applications. It's focused on helping large enterprises transition their legacy systems to a modern cloud platform. Users can take advantage of its wide range of analytics features to do everything from producing simple visualizations to using machine learning algorithms to obtain insights from data.

**R** is an open source programming language and computing environment with a focus on statistics and graphical data visualization. R features numerous graphical tools and over 15,000 open source packages available, including many for loading, manipulating, modeling, and visualizing data. The environment allows technical analysts with programming skills to build almost any type of data analysis, but users without those programming skills should look elsewhere.

**Python** is an open source, high-level programming language that's often used by technical analysts and data scientists. It now boasts more worldwide developers than Java and has more than 200,000 available packages. Python can handle many different analyses on its own, and can integrate with third-party packages for machine learning and data visualization. Popular data visualization packages include Matplotlib, Plotly, and Seaborn. Python is also used as a programming interface to other analytics systems.

**Microsoft Excel** is the most common tool used for manipulating spreadsheets and building analyses. With decades of development behind it, Excel can support almost any standard analytics workflow and is extendable through its native programming language, Visual Basic. Excel is suitable for simple analysis, but it is not suited for analyzing big data — it has a

limit of around 1 million rows — and it does not have good support for collaboration or versioning. Enterprises should consider more modern cloud-based analytics platforms for large and collaborative analyses.

## 4. Python

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built-in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.

## Why Python for Data Science?

For many people (myself Among them), the Python Language is easy to fall in love with. Since its first appearance in 1991, Python has become one of the most popular dynamic, programming language, along with Perl, Ruby, and other. Python and Ruby have become especially popular in recent years for building websites using their numerous web frameworks, like Rails (Ruby) and Django (Python). Such language are often called scripting languages as they can be used to write quick-and-dirty small programs, scripts. I don't like the term "scripting language" as it carries a connotation that they cannot be used for building mission-critical software.

Among interpreted languages Python is distinguished by its large and active scientific computing community. Adoption of Python for scientific computing in both industry application and academic research has increased significantly since the early 2000s.

For Data Analysis and interactive, exploratory computing and data visualization, Python will inevitably draw comparisons with the many other domain-specific open source and commercial programming languages and tools in wide use, such as R, MATLAB, SAS, Stata, and others. In recent years, Python's improved library support (primarily pandas) has made it a strong alternative for data manipulation tasks. Combined with Python's strength in general purpose programming, it is an excellent choice as a single language for building data-centric applications.

## Why Python Important in Data Science?

It uses the elegant syntax, hence the programs are easier to read.

It is a simple to access language, which makes it easy to achieve the program working.

The large standard library and community support.

The interactive mode of Python makes its simple to test codes.

In Python, it is also simple to extend the code by appending new modules that are implemented in other compiled language like C++ or C.

Python is an expressive language which is possible to embed into applications to offer a programmable interface.

Allows developer to run the code anywhere, including Windows, Mac OS X, UNIX, and Linux.

It is free software in a couple of categories. It does not cost anything to use or download Python's or to add it to the application.

## What Makes Python Suitable for Data Science?

**It's Flexible:** If you want to try something creative that's never done before; then Python is perfect for you. It's ideal for developers who want to script applications and websites.

**It's Easy to Learn:** Thanks to Python's focus on simplicity and readability, it boasts a gradual and relatively low learning curve. This ease of learning makes Python an ideal tool for beginning programmers. Python offers programmers the advantage of using fewer lines of code to accomplish tasks than one needs when using older languages. In other words, you spend more time playing with it and less time dealing with code.

**It's Open Source:** Python is open-source, which means it's free and uses a community-based model for development. Python is designed to run on Windows and Linux environments. Also, it can easily be ported to multiple platforms. There are many open-source Python libraries such as Data manipulation, Data Visualization, Statistics, Mathematics, Machine Learning, and Natural Language Processing, to name just a few (though see below for more about this).

**It's Well-Supported:** Anything that can go wrong will go wrong, and if you're using something that you didn't need to pay for, getting help can be quite a challenge. Fortunately, Python has a large following and is heavily used in academic and industrial circles, which means that there are plenty of useful analytics libraries available. Python users needing help can always turn to Stack Overflow, mailing lists, and user-contributed code and documentation. And the more popular Python becomes, the more users will contribute information on their user experience, and that means more support material is available at no cost. This creates a self-perpetuating spiral of acceptance by a growing number of data analysts and data scientists. No wonder Python's popularity is increasing!

## 5. R Language

R is a language and environment for statistical computing and graphics. R provides a wide variety of statistical (linear and nonlinear modelling, classical statistical tests, time-series analysis, classification, clustering, ...) and graphical techniques, and is highly extensible. One of R's strengths is the ease with which well-designed publication-quality plots can be produced, including mathematical symbols and formulae where needed. Great care has been taken over the defaults for the minor design choices in graphics, but the user retains full control. R is available as Free Software under the terms of the Free Software Foundation's GNU General Public License in source code form. It compiles and runs on a wide variety of UNIX platforms and similar systems (including FreeBSD and Linux), Windows and MacOS.

## Why R for Data Science

R is one of the programming languages that provide an intensive environment for you to analyze, process, transform and visualize information.

It is the primary choice for many statisticians who want to involve themselves in designing statistical models for solving complex problems.

**R contains a sea of packages** that appeal to all the forms of disciplines like astronomy, biology, etc. While R was originally used for academic purposes, it is now being used in industries as well.

*R is an advanced language that is used for performing complex statistical modeling.* Moreover, R also provides support for operations on arrays, matrices, and vectors. **R is famous for its graphical libraries** that allow the users to delineate aesthetic graphs and make them intractable for the users.

Moreover, R allows its users to develop web-applications using R Shiny, which is used for embedding visualizations in web-pages and provides a high level of interaction to the users.

Furthermore, *data extraction is an important part of data science.* In order to do so, R provides the option of interfacing your R code with database management systems.

In addition to this, **R provides you with several options of advanced data analytics** like the development of prediction models, **machine learning algorithms**, etc. R also provides several packages for image processing

## Why is R Important in Data Science?

R provides various important **packages for data wrangling** like dplyr, purrr, readxl, google sheets, datapasta, jsonlite, tidyquant, tidyr etc.

R provides **extensive support for statistical modelling**. Since Data Science is statistics heavy, R is an ideal tool for implementing various statistical operations on it.

R is an **attractive tool for various data science applications** because it provides aesthetic visualization tools like ggplot2, scatterplot3D, lattice, highcharter etc.

R is heavily used in data science applications for ETL (Extract, Transform, Load). It provides an interface for many databases like SQL and even spreadsheets.

Another important ability of **R** is to **interface with NoSQL databases and analyze unstructured data**. This is very useful in Data Science applications where a pool of data has to be analyzed.

With R, **data scientists can apply machine learning algorithms** to gain insights about future events. There are various packages like rpart, CARET, randomForest, and nnet.

## What Makes R Suitable for Data Science?

R is reliable and useful in **academia** for many years. Traditionally, R was used for research purposes at the academy because it provided various statistical tools for analysis. With the advancements in data science and the need for analyzing data, R became a popular choice in the industry as well.

R is an ideal tool when it comes to **data wrangling**. It allows the usage of several preprocessed packages that makes data wrangling a lot easier. This is one of the main reasons as to why R is preferred in the Data Science community.

R provides its famous ggplot2 package which is most famous for its **visualizations**. Ggplot2 provides aesthetic visualizations that cater to all the data operations. Furthermore, ggplot2 provides a degree of interactivity to the users so that they can understand the data embedded in the visualization more clearly.

R contains **machine learning packages** for various operations. Be it boosting, building random forests or performing regression and classification, machine learning provides a wide array of packages.

## 6. Conclusion

It's debatable when it comes to the usage of Python and R. Both of these languages come with their advantages and disadvantages. Python is used by a lot of people for multiple people, but R is also under usage. Python is used for a wide range of features, and R is used majorly for statistics. It depends upon the user to pick the language based on the requirement.

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# **A review on workplace Spirituality and Employee engagement contributing in agile organization**

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## **Abstract:**

This paper deals with the main concept workplace spirituality that it comes from the combination of Human resources management and organizational behavior. This paper reviews various articles towards how an effective organizations practice their employees with engaged in higher workplace spirituality and how it scores its effectiveness and contribution towards the organizational growth that leads to success. The term agile organization means sound full and active in nature. Researcher had reviewed various research articles for better understanding for this particular concept. It also found the inter relation between workplace spirituality and employee engagement. All the reviews are collected from various research articles.

## **Keywords:**

*Workplace spirituality, Workforce agility, Human resource management, organizational behavior.*

## **Introduction:**

Like any other service industry, the hospitality industry requires staff members to work in direct contact with the customers and coworkers. Employees are expected to provide their guests a good stay and make them leave the place with pleasant memories. (Chaudhary, 2022)<sup>1</sup>. The challenge today is not just retaining talented people, but fully engaging them, capturing their minds and hearts at each stage of their work lives. Employee engagement has emerged as a critical driver of business success in today's competitive marketplace. Further, employee engagement can be a deciding factor in organizational success. Not only does engagement have the potential to significantly affect employee retention, productivity and loyalty, it is also a key link to customer satisfaction, company reputation and overall stakeholder value. Employee engagement is a complex concept, with many issues influencing engagement levels. Consequently, there are many pathways to foster engagement, with no one that fits all organizations. While each company may define employee engagement



differently, ultimately, the key to effective engagement will be rooted in the flexibility of approach most appropriate for each individual firm. (Jyoti Naganath Shinde, 2015)<sup>2</sup>.

### **Workplace Spirituality:**

According to spirituality the stress is the state of Soul. Soul has its own three faculties i.e. Mind, Intellect and impressions. And when the mind and intellect are not working in harmony, the intellect can't work accurately. These three faculties has three main works i.e. Mind is for thinking and Intellect is for decision making and when we do any work again and again it becomes our Sanskara or impression. And when these three are not working accurately that is the stress. In the stress Mind thinks a lot about the things necessary or unnecessary. (Balamurugan, 2021)<sup>4</sup> Spirituality in the workplace has been acknowledged as a unique approach to improving employee performance. "the spiritual approach causes a change in the values at work to promote collaboration rather than fear at work." A particular pattern of spiritual guidance emerges when the workplace may provide appropriate conditions for professionals, where they share their behavior and attitudes to foster moral values and a sense of meaning in their work. Spirituality in the academic workplace thus needs to foster a teaching community and administrative professionals with persistence, assertive behaviour, and agile thinking to achieve their organization's objectives, particularly in the Covid 19 scenario. (Saeed, 2022)<sup>5</sup>

### **Employee Engagement:**

Employee engagement is critical to any organization, conducted the most influential study on employee engagement in 1985. expanded on early work by differentiating between intrinsic and extrinsic motivation. Competence, autonomy, and psychological relatedness which are psychological needs, motivate the individual to initiate behavior essential for psychological health and well-being of an individual and if satisfied may lead to optimal function and growth. The basic needs of satisfaction have been found to directly relate to dedication of employees. (Schrita Osborne, 2017)<sup>6</sup>

### **Higher Education Academicians:**

Teachers are the soul of any academic institution, and therefore there is a need to devise new strategies in order to develop their technical, professional and core competencies at workplace and also cultivate an agile mindset that assists in improving their relationships with students, fellow colleagues and top management at workplace. The progress of a nation is not feasible without increasing potential ability and eminence of the teachers who are crucial for the society. Teachers who are satisfied with their jobs will be more loyal to their institutions. Spirituality comprises of a sense of unity, belongingness at workplace and reflects divine principles. WS has been recognized

as one of the inimitable ways of enhancing the performance of employees. (Pau, 2019)<sup>7</sup> Teachers must provide the mental and emotional support to the students at times when need arises to face a challenging situation and emerge victorious. Just as corporate organizations worldwide have toiled hard to achieve business excellence through the creation of an agile workforce, academicians’ of higher educational institutions (HEI) also need to emerge with flying colors by adopting the same methods. Modern-day institutes of higher learning are trying to create agile operational strategies to facilitate the teaching professionals to create an agile learning environment.

**Review of Literature:**

**Table 1**

**Reviews Gathered for this Research**

S.NO	Name of the Website
1.	Google Scholar
2.	Taylor and Francis
3.	Science Direct
4.	SAGE

Using a modified Dissimilarity Index to quantify the segregation of three Chilean cohorts, we find that, unlike in secondary education, academic performance is more decisive than socioeconomic background in the distribution of students in postsecondary education, with a notable reduction in the socioeconomic segregation levels in the transition to the latter. (Kuzmanic, 2022) Informing teachers about what inclusive education is may only have limited impact on teachers’ actual inclusive education practices. More support in how teachers can apply the concept of inclusive education to practice may be needed so that their beliefs in their capabilities to teach inclusively are fostered and bolstered. (Woodcock, 2022). Analysis revealed that teaching experience and teaching context impacted self-efficacy. Knowledge of inclusive education policies elevated the self-efficacy beliefs of teachers. Confidence in teaching in inclusive classrooms, pre-service teacher education, professional learning and experiential contact with people with disability were also influential. (Wray, 2022). Six online focus groups (with thirty-two lecturers) revealed both enthusiasm and stress, and six tension fields that influenced their experiences with online education during COVID-19: (1) connection with students, (2) connection with colleagues, (3) digital opportunities and threats for students’ learning processes (online student feedback, online interaction, structured learning

materials, flexibility in time and space), (4) changing teacher roles, (5) tension due to time pressure and (6) support issues. Every tension field contains both opportunities and threats for online education, which can inform practitioners of online education in the future of university education. (Bruggeman, 2022). The model incorporates employees' psychological needs satisfaction and their subsequent crisis coping strategies so as to explain the process that underlies the effects of leader communication on employee engagement. (Tao, 2022). As hypothesized, employees were more engaged on the days they designed their work to be more playful, which was explained by the satisfaction of their needs for autonomy, relatedness, and competence. Moreover, as expected, designing fun and designing competition differed in how and why they related to work engagement. (Scharp, 2022). High (low) workforce agility via increased (decreased) firm performance was associated with high (low) corporate reputation. Furthermore, transformational leadership of top management and talent management via workforce agility were positively related to firm performance (Das, 2022). The literature has been reviewed on the agility concept. Different agility aspects, dimensions, nature, and terminology are covered in the literature review. Different types of organizational capabilities have been discussed and the organization capability dimensions required to achieve agility in the manufacturing system have been identified (Sharma, 2022).

## **Conclusion:**

Workplace Spirituality research has moved from its initial stages to the stage where researchers are trying to find out the organizationally beneficial effects of the idea of workplace spirituality. Spirit at work, individual spirituality, organizational spirituality, spiritual development, spiritual climate and spiritual leadership are the various research constructs which the researchers have developed in the domain of workplace spirituality research. This facilitates the research to move from the process of scale development to the stage of empirical testing of the same in order to satisfy the tests of reliability and validity of the instruments concerned. Thus, this process contributes to the robustness and empirical vigor of workplace spirituality research, toward which this paper has contributed so as to facilitate the process of strengthening the psychometric properties of Workplace Spirituality.

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ECOMMERCE WEBSITE

PHONISTA

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The world economy is witnessing a transition. All companies are transformed into information-based operations through online technologies. The pace of technical transition is so exponential that modern electronic commerce is now making significant shifts in the economic environment, impacting all areas of industry. The Web has expanded companies' scope. The vast quantity of business information made accessible by the global network that facilitates the gathering of information between firms, a corporation, its clients and the various divisions of a business is increasing exponentially. The information-based virtual value chains for any company cannot be overlooked operationally or strategically. This review article discussed the aspects of electronic commerce including its importance, facilitators, benefits, challenges and scope in the Indian market.

## ***Introduction***

PHONISTA is an online store for purchasing Mobile Phones. This store is an ecommerce website which has been developed using HTML, CSS, BOOTSTRAP, MySQL and PHP. In this website, HTML, CSS, BOOTSTRAP is used for front end and PHP for back end with MYSQL for the queries for Database. The user can see a number of mobile phones with their price and they can easily add the mobile phones in the cart, which can be one or more. The customer can easily log in to the system. First, there will be a home page where user can see an interface and four sections of mobile phones of different brands. After that, customer can easily go and see the phones and the prices, but for adding them to cart or moving forward to buying it, they must need to LOG IN. The MODAL will be visible for logging in. After that, with same email and password the user can login again, once the session is over. The customers will be able to see the total amount they have to pay. They can also add more mobile phone or remove the selected ones. The total and final amount will be provided to the customer. After that, or after confirming the order, the customer will simply land to the success page. **The benefits of setting up this ecommerce website's project are:**

### **Low operating cost with 24/7 availability**

Unlike a physical shop, an online store does not need a space to rent, so you don't need to worry about paying rent, or electricity fee, or any other fees that come with renting a space. That's a lot of savings you can invest in promoting and growing your business! Plus, this stores are open round the clock, always ready to sell to buyers worldwide at no extra cost. Around the clock e-commerce websites are very valuable and will enhance your business.

### **Control over brand and message**

Setting up your own retail website allows you to connect with prospective shoppers on your own terms. Share the latest customer success story, display the entire product portfolio, and so much more. Whatever you think will close the sale, go for it and don't worry about character limits, image caps or layout restrictions. Furthermore, you control your marketing. For example, you can choose to send emails to your customers every day, informing them of a sale or a new product.



## **Data**

You can gather a massive amount of data that can be very useful. Track your customers' behavior and their interaction. This will boost your marketing efforts and identify your most popular products. Subsequently, you can make a conscious decision to allocate your time on products that are wanted and maybe discontinue products or services that are not as popular.

Furthermore, you can track which page a customer exited on your website. If this happens several times, you might want to look at that page and consider what you can do to improve it and make the customer want to move on to the next step in the process instead of exiting.

## **Shelf space exclusivity**

One disadvantage to trading through an online marketplace is that your goods or services are placed next to competing ones. The struggle for attention forces merchants to slash prices and pay premium listing fees that reduce margins. However, if you own an e-commerce website, your visitors will only see the products and services you offer instead. Additionally, your visitors are there purely because of the interest they have in your products and services.

## **SEO visibility**

Allocating time to implement search engine optimization of your e-commerce website builds visibility for your brand. Basically, everything you're spending time and money on is purely for the sake of your e-commerce website. Ensure that visitors find your shopping website on Google when they search for a product and make it effortless for them to purchase directly.

## **No transaction fees**

While payment models differ, most e-commerce website platforms charge a flat subscription fee instead of charging per listing or transaction. Costs are low and transparent, no matter how wildly successful you are.

## **Encourage loyalty**

One purpose of an e-commerce website is to have repeat customers and repeat sales. You should ensure that you encourage loyalty in a repeat customer who buys various products from your e-commerce website.

Challenges faced during the making of this ecommerce website:

### *Right Choice of Product Range*

If you want to be an e-entrepreneur and set up an ecommerce site, the first challenge is the right choice of products. The range of services or products you provide can usually make or break a deal. Before setting up our store, assured that we first did our research on key market trends, the kind of products that are in demand and if the business is sustainable.

*building connections, so that data must be securely saved into database, keeping privacy of a customer a priority.*

### *Converting Website Visitors into Shoppers*

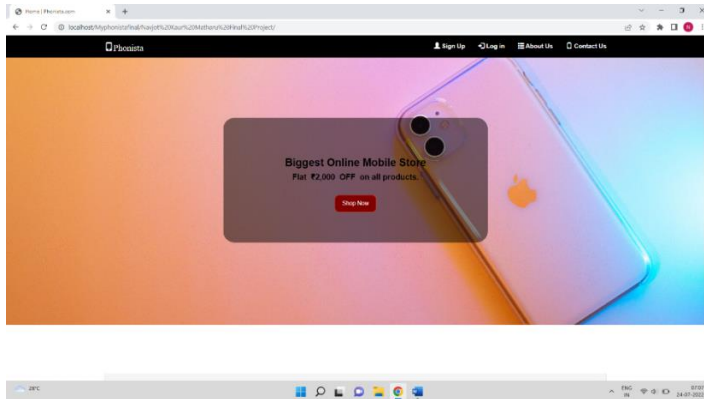
our task does not end once you get traffic onto our website. It is important that we convert those visitors into paying customers. The first rule of the game is to bring in quality leads. Then your photographs, site user interface, design, product cataloguing and brand equity will do the rest. Entice the shopper with the right communication; one which makes them buy.

## **Web pages**

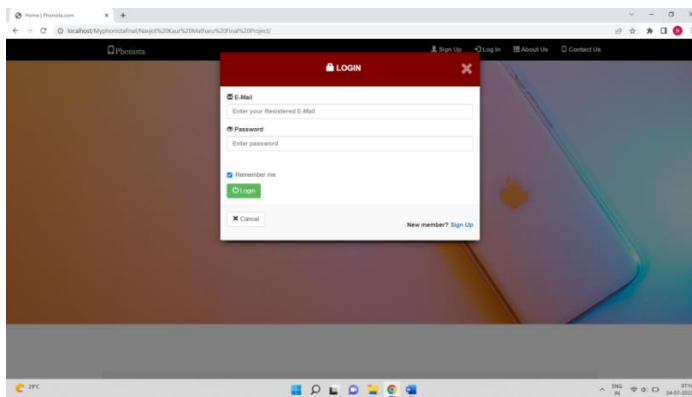
This website includes 9 HTML or PHP pages.

- I. Index.php
- II. About\_us.php
- III. Settings.php
- IV. Signup.php
- V. Cart-add.php
- VI. Cart.php
- VII. Login\_submit.php
- VIII. Success.php
- IX. Contact\_us.php

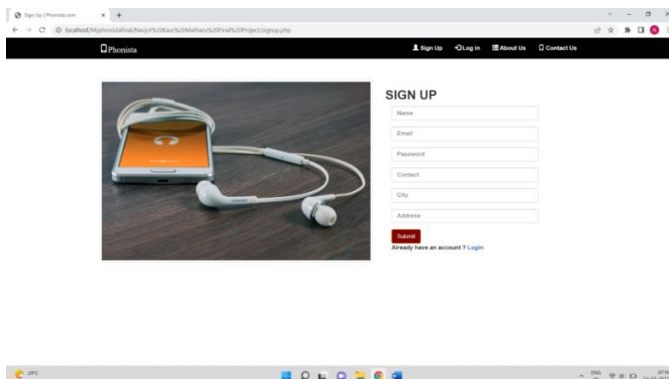
## Home page



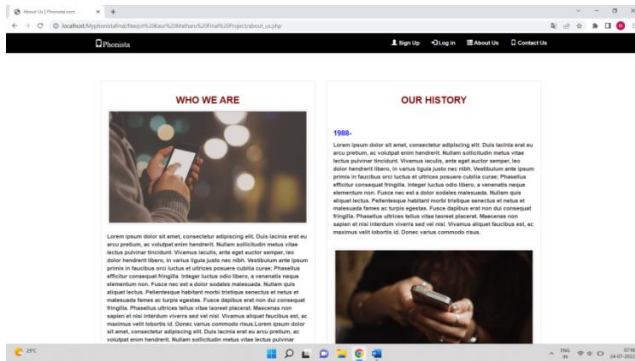
## Login Modal



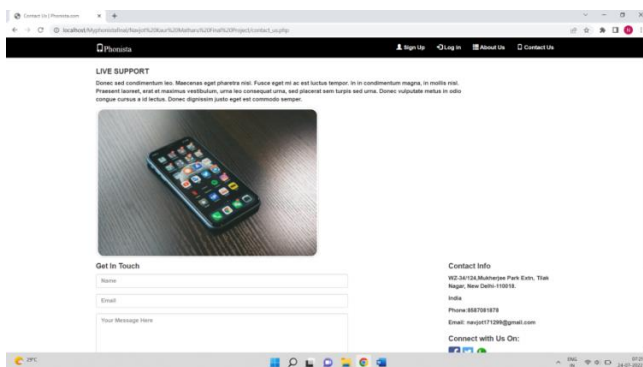
## Sign up, if new



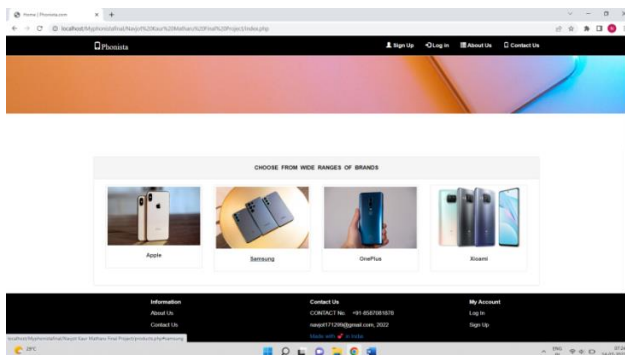
## About us page

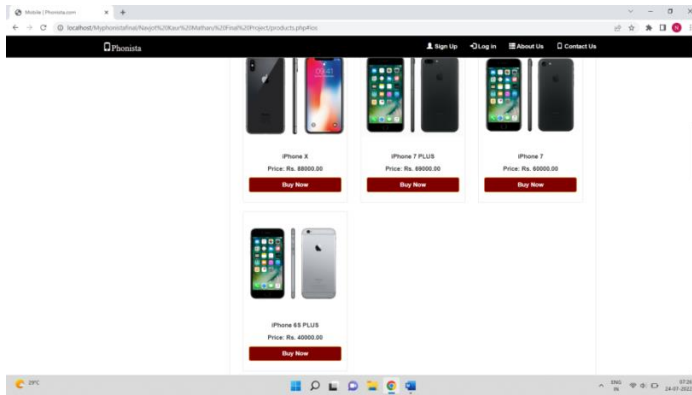


## Contact us page

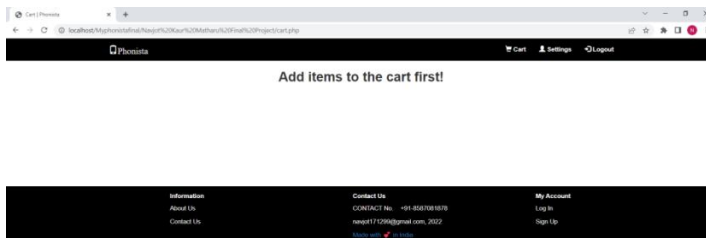


## Interfae for mobile phones

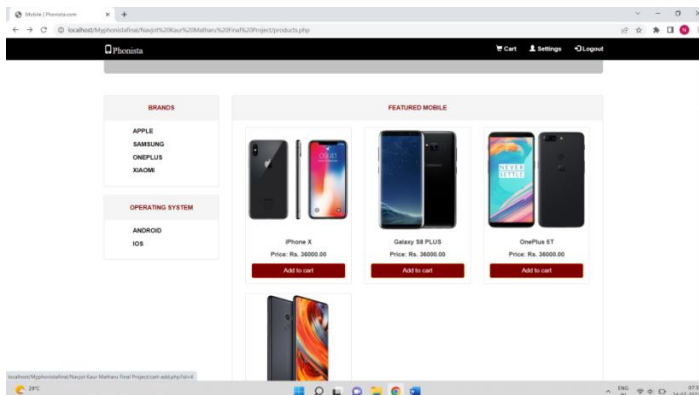




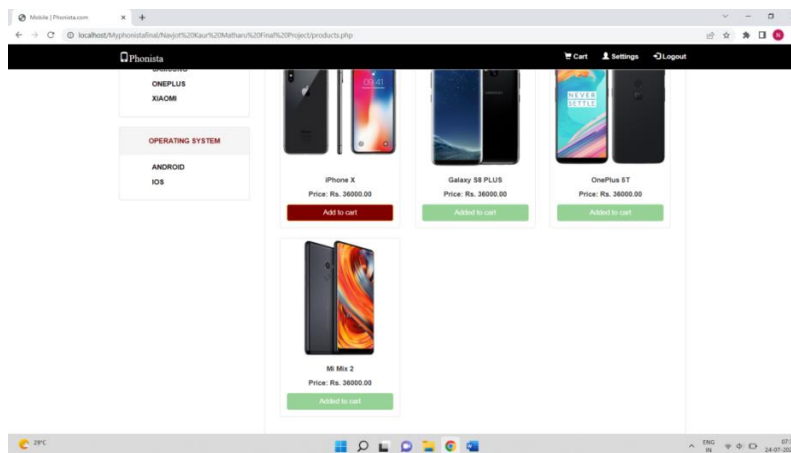
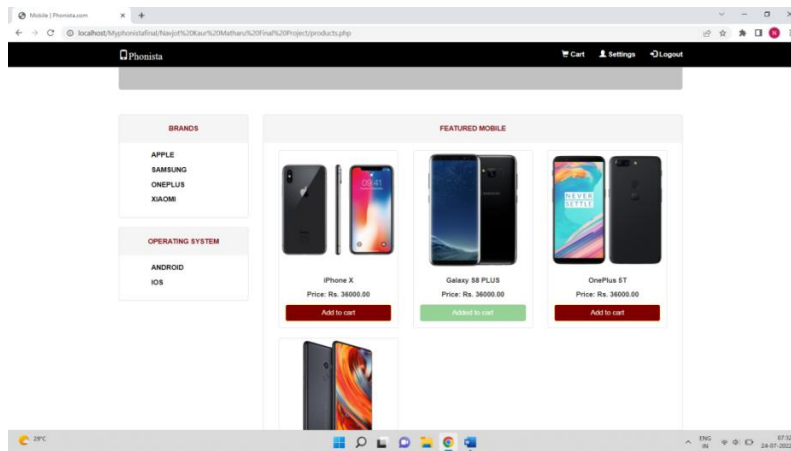
After giving your registered email and password , user can see a cart page ,



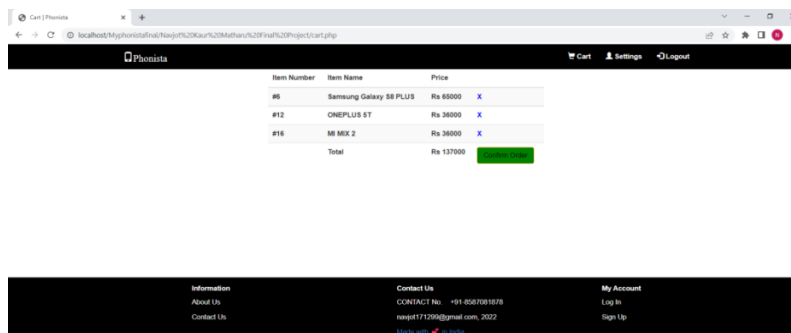
By adding to the cart



Like this



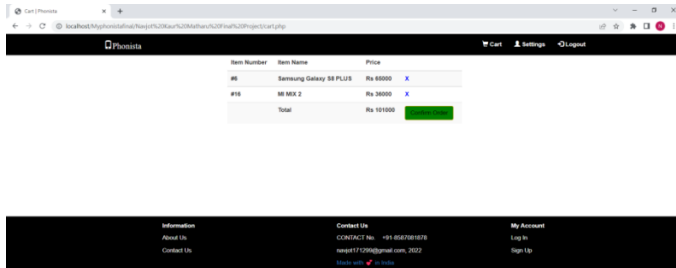
So, now to check the cart page in navbar





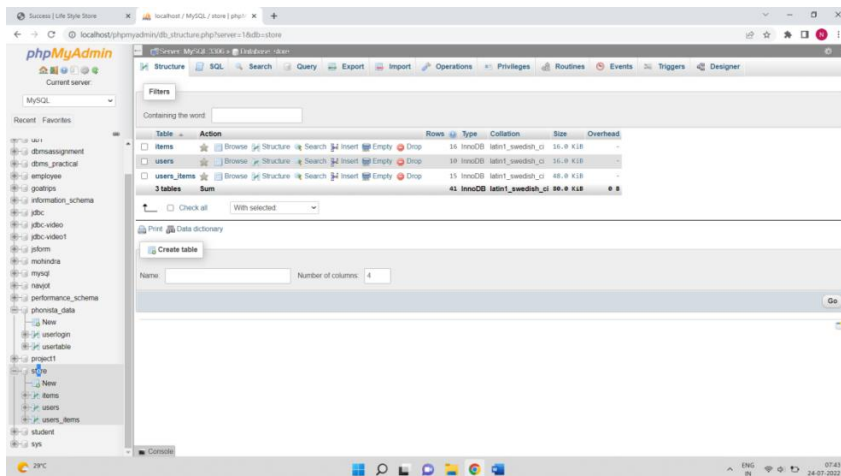
*You can see the amount added of three phones selected.*

*You can even remove one if you don't want to buy, with a simple click on cross.*

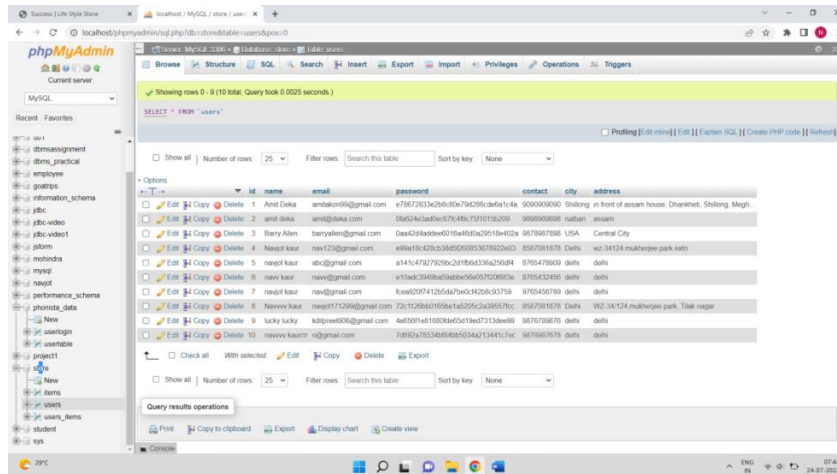


*Now the confirm order button will land you to the success page.*

*Database connection, these Three tables will store the data. In database store*



*.One is for user login data:*

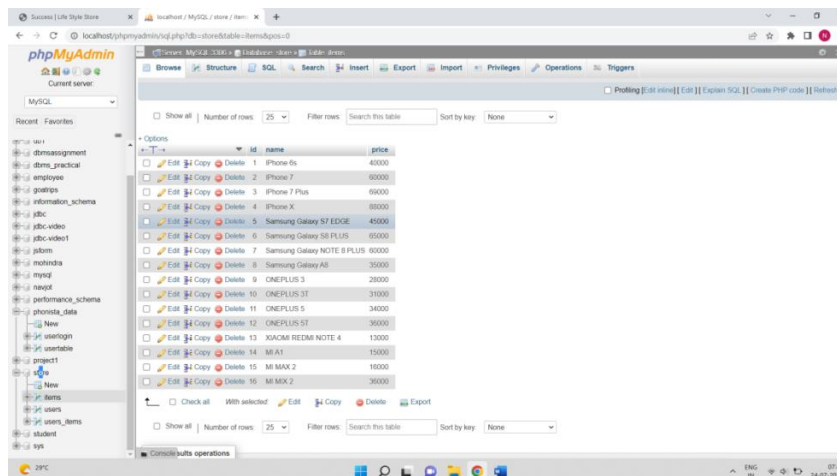


Showing rows 0 - 9 (10 total, Query took 0.0025 seconds)

```
SELECT * FROM `users`
```

id	name	email	password	contact	city	address
1	Amal Deka	amaltor9@gmail.com	e7867283c3e2b30a796289c4d6fa1c4a	900090090	Shilong	in front of assam house, Dhanekh, Shilong, Megh.
2	amit deka	amit@deka.com	0ba24e3ad3d0c57c45c73f1c15b209	999909099	nabha	assam
3	Berry Allen	berryalen@gmail.com	0aa24e3ad3d0c57c45c73f1c15b209	987987989	USA	Central City
4	navaj kaur	nav123@gmail.com	e99a18c428c330c99999999999999999	659761678	Delhi	WZ 34124,mulherjee park edn
5	navaj kaur	abc@gmail.com	a1f1c478278209c3d18b64236a25694	876547869	delhi	
6	navaj kaur	navaj@gmail.com	e15ba3c39f5baf3ab9e56a57203033a	876543295	delhi	
7	navaj kaur	nav@gmail.com	f0a9207412b5da7ba0c42b6c30759	9765456789	delhi	
8	Navaj kaur	navaj7129@gmail.com	72c11799b07658b1fa205c2a395578c	8587818178	Delhi	WZ 34124,mulherjee park, Triak nager
9	lucky lucky	ludpreet60@gmail.com	4a059f1a8160b4d5c519ad7213d9a9	987678976	delhi	
10	navaj kaur	navaj@gmail.com	7d8b2a783348f48e534e213441c7ac	987667678	delhi	

*One is for items we are having to sell with their ids*

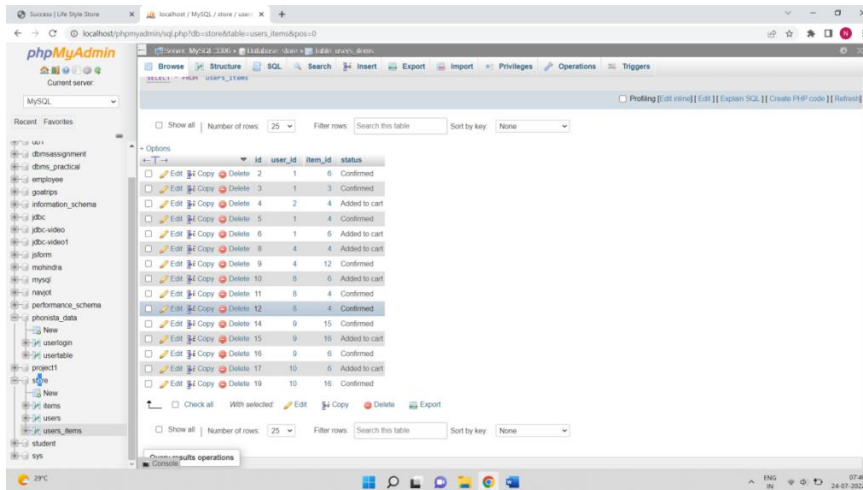


Showing rows 0 - 15 (16 total, Query took 0.0025 seconds)

```
SELECT * FROM `item`
```

id	name	price
1	iPhone 6s	40000
2	iPhone 7	60000
3	iPhone 7 Plus	69000
4	iPhone X	89000
5	Samsung Galaxy S7 EDGE	45000
6	Samsung Galaxy S8 PLUS	65000
7	Samsung Galaxy NOTE 8 PLUS	69000
8	Samsung Galaxy A8	35000
9	ONEPLUS 3	28000
10	ONEPLUS 3T	31000
11	ONEPLUS 5	34000
12	ONEPLUS 5T	36000
13	XOACM REDMI NOTE 4	13000
14	MI A1	15000
15	MI MAX 2	16000
16	MI MIX 2	35000

*Last but most important is the combined table for user and the product, to do the further calculations.*



*So, this was the working of this ecommerce website phonista.*

### *Need of project*

Through this website, anyone can buy anything at their place, reducing time consumption. In this physical growing world, there is a prime to need to consume time efficiently, to reduce time consumption and give them a virtual store to shop and compare items.

### *Scope of system*

This provides an interface, where user can sign up, login in the system and can see different products. This interface provides facility to see mobile phones of different companies and they can order according to their need. This is a user-friendly interface, users can sign up, login in system and select items according to them and place their order, anytime and anywhere. It will reduce time consumption and available 24\*7.

### *Html*

**HTML** (Hypertext Mark-up Language) is the most basic building block of the Web. It defines the meaning and structure of web content. Other technologies besides HTML are generally used to describe a web page's appearance/presentation or functionality/ behaviour.

"Hypertext" refers to links that connect web pages to one another, either within a single website or between websites. Links are a fundamental aspect of the Web. By uploading content to the Internet and linking it to pages created by other people, you become an active participant in the World Wide Web. HTML uses "mark up" to annotate text, images, and other content for display in a Web browser. HTML mark up includes special "elements" such

as `<head>`, `<title>`, `<body>`, `<header>`, `<footer>`, `<section>`, `<p>`, `<div>`, `<span>`, `<img>`, `<nav>`, `<ul>`, `<ol>`, `<li>` and many others. HTML is not a programming language, meaning it doesn't have the ability to create dynamic functionality. Instead, it makes it possible to organize and format documents, similarly to Microsoft Word. HTML is written in the form of elements consisting of tags and closed in angle brackets (like `<HTML>`). HTML tags most commonly comes in pairs like `<h1>` & `</h1>`, although some tags present empty elements and so are unpaired, for `<img>`.

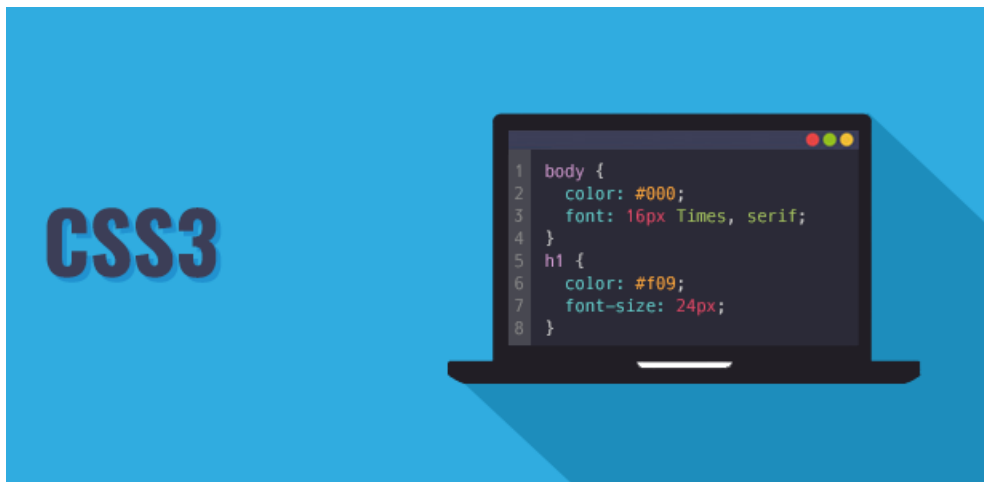


A web browser can read html file and composed them into visible or audible web page. The browser does not display the html tags, but uses them to interpreted the content of the page. HTML describe the structure of a web site semantically along with cues for presentation, making it a mark-up language rather than a programming language.

HTML elements form the building blocks of all web sides HTML allows images and objects to embed and can be used to create interactive forms. It provides a mean to create structured document by denoting structural semantics for text such as heading, paragraph, list, link quotes and other items. It can embed scripts written in languages such as java scripts which effect the behavior of html web pages.

## CSS

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.CSS handles the look and feel part of a web page. Using CSS, you can control the colour of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colours are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the mark up languages HTML or XHTML. Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a mark up language such as HTML.CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.



CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts.[3] This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and repetition in the structural content as well as enabling the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

**Bootstrap** is a [free and open-source CSS framework](#) directed at responsive, [mobile-first front-end web development](#). It contains [CSS](#)- and (optionally) [JavaScript](#)-based design templates for [typography](#), [forms](#), [buttons](#), [navigation](#), and other interface components. Bootstrap is a HTML, CSS & JS Library that focuses on simplifying the development of informative web pages (as opposed to web apps). The primary purpose of adding it to a web project is to apply Bootstrap's choices of color, size, font and layout to that project. As such, the primary factor is whether the developers in charge find those choices to their liking. Once added to a project, Bootstrap provides basic style definitions for all HTML elements. The result is a uniform appearance for prose, tables and form elements across web browsers. In addition, developers can take advantage of CSS classes defined in Bootstrap to further customize the appearance of their contents. For example, Bootstrap has provisioned for light- and dark-colored tables, page headings, more prominent pull quotes, and text with a highlight.



## ***Database***

MySQL is an open-source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Wideness's daughter, and "SQL", the abbreviation for Structured Query Language.



A relational database organizes data into one or more data tables in which data types may be related to each other; these relations help structure the data. SQL is a language programmer use to create, modify and extract data from the relational database, as well as control user access to the database. In addition to relational databases and SQL, an RDBMS like MySQL works with an operating system implement a relational database in a computer's storage system, manages users, allows for network access and facilitates testing database integrity and creation of backups.

### ***PHP***

**PHP** started out as a small open-source project that evolved as more and more people found out how useful it was. Rasmus Lerdorf unleashed the first version of PHP way back in 1994.

**PHP** is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain. I will list down some of the key advantages of learning PHP:

PHP is a recursive acronym for "PHP: Hypertext Pre-processor".

PHP is a server-side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites.

It is integrated with a number of popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.



PHP is pleasingly zippy in its execution, especially when compiled as an Apache module on the Unix side. The MySQL server, once started, executes even very complex queries with huge result sets in record-setting time.

PHP supports a large number of major protocols such as POP3, IMAP, and LDAP. PHP4 added support for Java and distributed object architectures (COM and CORBA), making n-tier development a possibility for the first time.

PHP is forgiving: PHP language tries to be as forgiving as possible.

PHP Syntax is C-Like.

#### Characteristics of PHP:

Important characteristics make PHP's practical nature possible –

- Simplicity
- Efficiency
- Security



## Tools and Environment

### Hardware requirements

- Processor: single or dual core processor
- Speed :233 mhz minimum speed
- Ram: min 4gb
- Super VGA (1280\*1024) or higher resolution adapter and monitor.
- Hard disk: 200GB minimum

### Software requirements

- Operating system
- WAMP sever
- Internet explorer
- Application development environment notepad
- Windows 2000/XP; windows 7; or above.
- Internet explorer /google chrome
- Notepad++



### ***Unit testing***

IT is the software development process in which the smallest unit of the system is tested. While performing unit testing of different types of source code the following problems occurred. Scripts and its connectivity to the HTML, PHP. Coding failed several times due to the minimal mistakes in the coding. Data did not get saved in the MySQL database due to the index error in the source code. Scripts did not work in some browsers as scripting was disabled as default setting. Submit button did not work in google chrome due to the security restrictions of accessing and modifying systems file in the chrome.

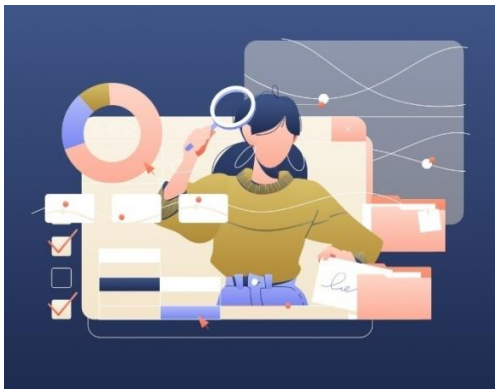


### ***Integration testing***

After the unit testing, we have to perform integration testing the goal here is to see if modules can be integrated properly., the emphasis being on testing interfaces between modules. Upon testing we found that all the modules are properly integrated and working fine.

### ***System testing***

Software meets its requirement in system testing the entire software is tested. The reference document for this process is the requirements document, and the goal is to see if so.



### ***Acceptance testing***

It is performed with realistic data of the client to demonstrate that the software is working satisfactorily. Testing here is focused on external behavior of the system; the internal logic of programs is not emphasized.

### **Result**

The application can be used for any E-commerce application. It is easy to use, since it uses the GUI provided in the user dialog. User friendly screens are provided. The application is easy to use and interactive making online shopping a recreational activity for users. It has been thoroughly tested and implemented.

### **Conclusion**

The increase trend of online shopping will only grow and expand in the future. According to a study, "as experience and comfort grows, spending increases." Furthermore, it concludes that people have substituted their needs to shop at local stores by shopping online. The convenience and innovative way of shopping will persuade more consumers to shop online. However, in the long run, small businesses will suffer the negative effects of online shopping. Small businesses have a harder time to establish market share online. They also have to compete with larger more well-known and trusted firms. With the growing demand of online shoppers, businesses have to alter their business model. Despite the advantages of shopping online, negative concerns of online shopping can still be reduced to enhance a user's online shopping experience. E-tailors can gain trust from consumers by guaranteeing privacy and security on their sites through a third-party seal of approval. Also, it can use interactive tools to help consumers make their purchasing decisions. Through their efforts, they can attract more consumers online and enhance a shopping experience so that consumers will return. As a result traditional retail shopping will be reduced and possibly replaced by online shopping in the future.

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## A Study on Measures to Promote Research in Higher Education Sector

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### ABSTRACT

India has been the seat of learning and abode of knowledge and wisdom since time immemorial. Higher education provides a gateway to a number of opportunities in the future. It is just like a door of opening to pathways, and one can always raise his other living standards by studying in higher in life. As our higher education needs are extensive and dynamic, beset by a number of challenges like population explosion, unemployment, brain-drain, the need of the hour is to drastically recreate our higher education sector through innovation and excellence – both in academics and research.

To study the concept researcher has tried to do research through secondary data for which various data available in books, journals, Magazines, online site etc.

Key Words : Higher Education, Research, Opportunities, Funding

# A Study On Measures To Promote Research In Higher Education Sector

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## **INTRODUCTION**

An investment in knowledge pays the best interest. Higher education is an important aspect in learner's life as it gives learners to learn more about anything and to pursue in that field. However, there are some challenges/problems in Higher Education that we are facing and it needs to be discussed. The higher education sector in India is progressing and transforming gradually. As higher education is considered the last stage of academic learning, and the studies done after the successful competition of secondary education. Higher education is an important aspect for learner's as it not only gives students/learners to learn more about any particular topic or any specialization, but also makes understand student the practical knowledge. As our higher education needs are extensive and dynamic, beset by a number of challenges like population explosion, unemployment, brain-drain, the need of the hour is to drastically recreate our higher education sector through innovation and excellence – both in academics and research. In this context, there is a need to develop more strategies, make more plans and take necessary measures for strengthen research and further research quality at our higher education sector. A determined and focused blueprint needs to be developed to achieve the best highest possible standard in research and teaching learning in order to keep pace with changing global trends.

## **RESEARCH METHODOLOGY**

Research an important tool which helps in contributing to the existing store of knowledge. Research methodology is a way to systematically solve the research problem. It is the science of studying how a research is done. The researcher has explained the methods and steps adopted for achieving the purpose of the study and to arrive at a meaningful conclusion. The descriptive Research Design has been adopted by emphasizing Government initiative for promoting research in higher education. Data are the base providing information which helps in research for the study. Data collection

comprises of secondary data for the study. The secondary data was collected from related journals, publications and from web-sites and few popular search engines.

## **OBJECTIVES**

- To understand the measures adopted to promote research.
- Benefits of measures adopted to promote research

**Top ten measures that need to be taken to enhance research and promote research quality at our higher education sectors are discussed here.**

### **Funding for research**

- ☐ Research funding is defined as a grant obtained for conducting scientific research generally through a competitive process. To apply for grants and securing research funding is an essential part of conducting research.
- ☐ The most important requirement is having an interest in the particular subject, thorough knowledge of the subject, and finding out the gap in the knowledge.
- ☐ The second requirement is to know whether your research can be completed with internal resources or requires external funding.
- ☐ The next step is finding out the funding agencies which provide funds for your subject, preparing research grant and submitting the research grant on time.
- ☐ Many local, national, and international funding bodies can provide grants necessary for research. The priorities for different funding agencies on type of research may vary and this needs to be kept in mind while planning a grant proposal.
- ☐ National level funding agencies
  - DST – Department of Science and Technology
  - DBT – Department of Biotechnology
  - UGC – University Grants Commission
  - SERB – Science and Engineering Research Board
- ☐ International Level Funding agencies which are to be approached for research grants
  - WTO – World Trade Organization
  - UNO – United Nations Organization
  - WHO – World Health Organization
  - World Bank

### **Infrastructure for research**

- ☐ Development of research infrastructure enhances our research and improves research quality drastically. It is possible by identifying and establishing research centers within



those institutes that are capable of undertaking high quality research.

- ☐ Research infrastructures are the services, facilities and resources used during research. Research infrastructures can be both physical and digital. This can include, for example: major pieces of equipment or collections of equipment; libraries, both physical and virtual etc. Such infrastructures are primarily used for research; they can also have a wider purpose, such as in education or public service. Research infrastructures also allow researchers around the world to share data far more quickly than in the past.
- ☐ Besides adequate, trained manpower, there should be centers equipped with sophisticated instruments required to conduct high-end research, databases that are required to undertake systematic literature reviews, meta-analyses, access to literature through databases like Scopus, Medline etc.
- ☐ For survival of research infrastructures they should be more sustainable. Infrastructure must attract support of financial community. It should meet a number of criteria to be sustainable :
  1. They must be open
  2. They must collaborate
  3. They must be diverse
  4. They must be adaptable
  5. Make use of best technology available
  6. Support principles of Open Sciences

## **Incentives for Research**

Research incentives are rewards offered to people in exchange for their participation in a study. Most often, these incentives are financial rewards that demonstrate appreciation for participants’:

- ☐ Time
- ☐ Effort
- ☐ Insight
- ☐ Value brought to the study

Good research needs to be encouraged through suitable incentives, making its use in appointments and promotions of teachers is debatable since introduction of API (Academic Performance Indicators), assessment for teachers by UGC in 2010 has come under criticism since it is thought to have resulted into automation of research output and teachers led to a rat race for accumulating API points in pursuit of their promotion. There is a lot of debate on whether there should be financial incentives to teachers, giving recognition to the teachers in their academics. Quality of research is more important over quantity of research. Experts must evaluate the field of quality of research based on their experience by using journal metrics like impact factor and citation index. 145 | P a g e

## **Manpower for Research**

Adequate, qualified, trained, well-oriented and specialized manpower is needed in right numbers to run research centers to carry out research in identified thrust areas. For developing such manpower in the field of research, methodology needs to be incorporated to UG and PG curriculum at college as well as university level so as to develop a research culture and equip a research temperament and among our students and scholars. At school level, students should be curious to promote creativity, critical, innovative and analytical thinking in later course of their life so as to emerge as ace researchers. Specialized training to the selected man power depends upon prioritized thrust areas of research identified by experts.

## **Integrity in Research**

Research integrity means conducting research in a way which allows others to have trust and confidence in the methods used and the findings that result from this. Conducting research with integrity also means meeting the professional standards expected of our researchers.

Research Integrity applies to the whole research lifecycle, from preparation and submission of grant and project proposals to the publication and dissemination of findings. For research to be of the highest standard, it must be robust and free from outside influences.

Key elements of research integrity include:

- Honesty
- Rigor
- Transparency and open communication
- Care and respect of all participants
- Accountability

These elements should be present at all stages of research. Research ethics is a key criterion of research integrity.

Young researchers need to be imparted adequate education about related issues like plagiarism, duplication, outsourced publishing etc. at an appropriate level of training. Research integrity has the potential to increase the quality of research in the research ecosystem, thereby increasing its overall effectiveness and impact into the future.

## **Translational research**

Transactional research seeks to produce more meaningful, applicable results that directly benefit human health. The goal of translational research is to translate basic science discoveries more quickly and efficiently. It is observed that evidence generated through various research hardly translates into policy and whatever little translates into policy is hardly implemented in actual practice. It makes the whole exercise and results into confining of research dissertations.

There is a need for greater coordination between researchers and policymakers for incorporating research findings and recommendations into our administrative policies.

Success of translational training programs must therefore be flexible enough to accommodate the needs of individual institutions and individual trainees within the institutions but that it must also be rigorous enough to document that the program is meeting its short-, intermediate-, and long-term objectives and that its trainees are meeting pre-established competency requirements.

- Encourages and promotes multidisciplinary collaboration among laboratory and clinical researchers.
- Incorporates the desires of the general public, with communities being engaged to determine their needs for health innovation.
- Identifies and supports the adoption of best medical and health practices.

### Policies for Research

Research Policy articles examines empirically and theoretically interaction between innovation, technology or research, on the one hand and social political and organizational processes on the other. Need of comprehensive, goal-oriented and focused research policies at institutional, regional/state levels as well as national level for enhancing research and promoting research quality in tune with fast changing global trends. Policies are important in research as they can identify critical problems, research the benefits and harms of policy solutions, estimate the costs and consequences of policy proposals, and actively participate in the policy process to aid real-time decision making. Such policies should be evidence based and practiced and implemented in a time-bound manner.

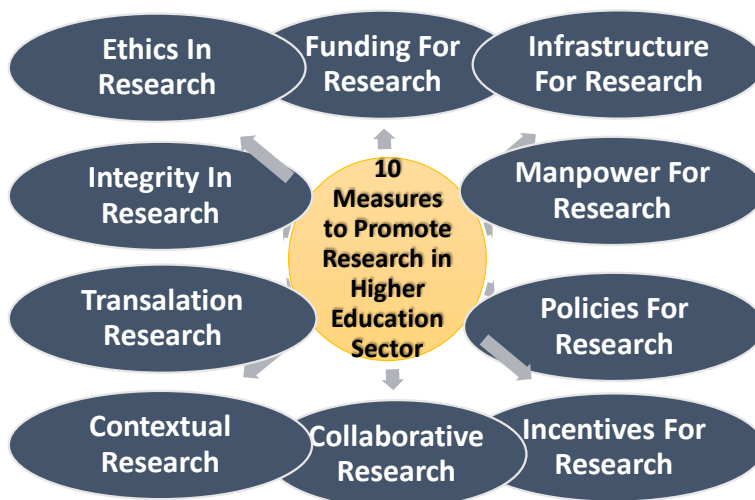
### .Ethics in Research

Research ethics matter for scientific integrity, human rights and dignity, and collaboration between science and society. These principles make sure that participation in studies is voluntary, informed, and safe for research subjects. Defying research ethics will also lower the credibility of your research because it's hard for others to trust your data if your methods are morally questionable. Even if a research idea is valuable to society, it doesn't justify violating the human rights or dignity of your study participants. Prime importance needs to be accorded to the issues like confidentiality, privacy, beneficence, autonomy and justice without which no credible and substantive research is ever possible.

Five principles for research ethics are as follows:

1. **Discuss intellectual property frankly**
2. **Be conscious of multiple roles**
3. **Follow informed-consent rules**
4. **Respect confidentiality and privacy**
- 5. **Tap into ethics resources**

Awareness about these components must be created from the very beginning of the research. An institutional ethics committee needs to be vigilant, proactive about any such malpractices in research and be strict in ensuring ethics in research. Without integrity and ethics, no substantial gains can be made in achieving high standards of quality in research.



## Contextual, Need – Based Research

Contextual Research helps in addressing guiding the needs of the society. The nations which are developed, universities maintain research fairs and establish research shops, so that community /society members can visit there & register their problems, according to the research projects which are being prepared & find solutions according to their actual problems. Likewise, timely and regular communication about research outputs plays an important role for greater transparency of research activities. Research institutions must think about these best practices apart from establishing entrepreneurship & innovation incubation cells within their research centers so as to harness the spirit of entrepreneurship through research. These cells help to startup to gather money for incubating innovative ventures.

## Collaborative Research

It is a form of cooperation between various disciplines; we can say that one discipline is dependent on the other discipline. It is considered that the quality of inter – disciplinary depends by the respective disciplines in the cooperative process.

Similarly if one discipline is dominant then the quality of other discipline will be poor. If the influence is balanced the quality will be high.

## **Benefits of Government initiatives to promote Research in Higher Education**

The Government is committed to provide justified access to quality education to all sections of the society and the vision of the Ministry is to realize Indian's human resource potential to its fullest in the education sector with equity and involvement. The Ministry Human Resource Development is implementing several schemes aimed at increase literacy and basic education of the youth, expanding access to all levels of education, including higher and technical education.

Several initiatives are currently being undertaken in this direction, such as in elementary education, the Right of Children to Free and Compulsory Education (RTE) Act, 2009 and Sarva Shiksha Abhiyan (SSA) programme aims for improvements in school infrastructure, curricular and assessment reforms, identification of learning indicators, improved teaching and learning resulting in better learning outcomes. Rashtriya Madhyamik Shiksha Abhiyan (RMSA), ICT in Schools, Centrally Sponsored Scheme on Teacher Education (CSSTE), Shaala Siddhi, Rashtriya Avishkar Abhiyan are being implemented to improve the quality of secondary education. Recently, the Department of School Education and Literacy has prepared the Samagra Shiksha- an Integral Scheme for School Education as a Centrally Sponsored Scheme and it is being implemented

throughout the country with effect from the year 2018-19. In higher education also, various schemes, namely, Rashtriya Uchchatar Shiksha Abhiyan (RUSA), Global Initiative for Academics Network (GIAN), Impacting Research, Innovation & Technology (IMPRINT), Technical Education Quality Improvement Programme (TEQIP), Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM), National Digital Library, campus connect programme, Uchhatar Avishkar Abhiyan, Unnat Bharat Abhiyan are being implemented to improve the quality of higher education. A number of initiatives are also undertaken by UGC and AICTE for quality improvement in higher and technical education.

## **Conclusion**

Higher Education in India needs to be emphasized in a good way. The matter is that it should not be limited to only getting a degree and getting a job. Institutes providing higher education should ensure that focusing on practical and skill-based knowledge are quite important in the field. If this can be achieved then we won't be having corporate slaves, rather than we would be having great leaders and productive candidates who would be delivering their best in their respective fields.

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