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# Awadh International Journal of Information Technology and Education

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# Virtual Reality Technology in Education

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## ABSTRACT

*Gurus of the 21st century have to be technology friendly to cater to learners wants who embrace the modern technologies. Using visual-based methods like PowerPoint presentations, videos, animation, etc., has helped the learners keep information compared to the traditional methods. Virtual Reality is the technology for the visualizing. This paper presents an overview of Virtual Reality (VR) technology and its uses in education. During this study, to better understand Virtual Reality contributions to education, a systematic review of the literature was conducted from Scopus, IEEE, and Google Scholar databases. The paper objective is to highlight the essential concepts, the beginning of the technology, its effect, related difficulties, and future directions of VR concerning education and the approaches considered by scholars. Identified gaps in the chosen writings works were also highlighted, and suggestions to overcome the identified gaps were concise.*

**Keyword:** Virtual Reality, VR, History of VR, Virtual Reality in Education, VR in Education.

## INTRODUCTION

Education has comprised digital devices to enlarge the teaching-learning method's effectiveness. Technology is omnipresent in every pupil's life these days. Their experience to the recent innovations of technology demands a difference in their learning process too. These days, due to the rapid innovations in technology, learners could witness virtual environments that are not possible in regular classrooms [Schunk, D.H. (2012)]. Immersive simulations that are multi-informational can create a strong visual impact called Virtual Reality or, VR.

[B. & Yang (2019)]

Though the term VR has increased a lot of attention in present days, [Jung, K. (2019)] resolved that Virtual Reality and Augmented Reality (AR) are not just hype. Several researches

have been conducted to explore the possible use of VR in different fields. Educators, developers, and researchers shows a significant interest in using Virtual Reality for educational purposes.

It is important to draw attention to the origination of the concept "VR" to know the technology. This section of the paper emphasizes on the conceptual origin of the term VR, basic theories, its growth, and theories relevant to VR's usage in education.

### DEFINITION(S) OF VR

- It creates a feeling of mental immersion into a 3-D world that tracks the user's position/ actions and response in the form of feedback. [Craig, A.B. (2018)]
- Virtual Reality is the use of computer technology to create a virtual environment which can be explored in 360 degrees. Unlike traditional interfaces, VR places the user inside the virtual environment to give an immersive experience.
- The term Virtual Reality was defined by different authors as follows:
- It simulates a computer generated 3-D world that comprises interactive objects with a sense of spatial presence. [Bryson, S. (2013)]
- We are making a robust effect of existence even when nothing exists. [A.F., Bakr (2018)]

### KEY ELEMENTS OF VR

Virtual Reality includes four key elements [Craig, A.B. (2018)]

- a) *Virtual World*: A 3-D world that exist in the form of a simulated real world.
- b) *Interactivity*: Allowing the users to naturally engage with the virtual world by facilitating instant response to any action.
- c) *Immersion*: The power of this technology to immerse the users into a virtual world that disconnects the physical world and suspends the disbelief of being in a virtual environment.
- d) *Sensory Feedback*: integrating maximum of human senses to offer better immersive experience. Sensory feedbacks could be in different forms like visual, audio, touch etc.

Any Virtual Reality application is measured to be a full-fledged application if that comprises of the four key elements. Suitable results are obtained by choosing the hardware and software configurations that complement VR's four key elements.

### HISTORY OF VR

Over the years, Virtual Reality technology has never stopped. Since 1838, several milestones illustrate this technology's development until this recent digitalization era, as detailed in Table 1.



**Table 1**

Milestone	Year	Description
Stereopsis	1838	Stereopsis is one of the concepts behind the working of VR headsets. It represents the user's ability to view through each eye that perceives horizontal differences.
Link Trainer	1929	This is the very first version of a flight simulator that was designed for training military pilots, which later became a prototype for the concept of VR.
Pygmalion's Spectacles	1935	Stanley G. Weinbaum included in his story, a pair of glasses that could simulate smell and touch in addition to the sight and sound. The story highlighted that a character was in the story instead of regular projection on a screen.
Telesphere Mask	1960	A head-mounted display that had miniaturized cathode-ray tubes fully immersing the user into the 3-D world.
Sensorama	1962	Sensorama is first of its kind multi-sensory VR device that could create a real immersive feeling with stereoscopic screen, stereo speakers, rotating chairs, odor sprayers, and fan-generated wind.
The Ultimate Display	1965	In this ultimate display, a realistic virtual world displayed through an HMD that includes 3-Dimensional sound and force feedback.
The Sword of Damocles	1968	Despite having a couple of HMD systems earlier, this is considered to be the first VR HMD that connects to the computer, with the ability to track user movements.
GROPE	1971	GROPE is considered first-ever force feedback gloves with the skeletal structure invented at the University of North Carolina.
VIDEOPLACE	1975	An artificial lab, inside which the user experiences virtual environments without wearing an HMD or gloves.
VCASS – Flight Simulator	1982	Visually Coupled Airborne Systems Simulator is a helmet that displays 3-D superimposed over the real-world content, which was used in training the pilots using flight simulators.
Naming Virtual Reality	1984	VPL Research Inc. was the first company to sell VR goggles and gloves to the public, and they also called this field a VIRTUAL REALITY.
Eye Phone	1988	Eye phone is a specially designed goggles and gloves that allow the users to see and interact with objects in the virtual space.
Virtual Wind Tunnel	1990	A VR technology that provides an opportunity to explore fluid flow simulations in different timing could be controlled by visualizing tools – Specifically used in aerodynamics.
Virtuality	1991	This is a gaming HMD that is accompanied by joystick and multipayer network units.
CAVE	1992	A room that comprises display units on all the side walls with rear projectors typically resembles a movie theatre that gives an immersive experience.
Virtual Vietnam	1997	An application that was developed to treat the veterans which allow the user to ride a combat helicopter.
SAS Cube	2001	Almost similar to CAVE, this room allows the users to experience stereoscopic projections. This technology is comparatively thrice the time cheaper than CAVE.
Street View	2007	Google Earth VR, which is made available for specific VR headsets through which 360° view of the selected street can be experienced.

Oculus Rift	2012	Oculus rift is a prototype HMD released in 2012 for the gaming platform that emerged with excellent build quality and standards.
Google Cardboard	2014	Simple, cardboard-made VR solution that turns a compatible mobile handset into a VR headset.
HTC Vive	2016	HMD with room-sized tracking allows users to move around and interact with the objects in the 3-D environment.
Oculus Half Dome	2018	A new update from Oculus offers a higher comfort level for viewing and physical movements because of the non-moving parts of the HMD.
Oculus Quest	2019	With touch controllers and 6 degrees of freedom, Oculus launched Oculus Quest.
Oculus Quest 2	2020	The advanced version of Oculus Quest was released with advanced touch controllers and the highest resolution display ever.

## VR AND EDUCATION

The term education refers to how the facilitation of resources, knowledge, expertise, or positive qualities are promoted. The primary objective of education is to help learners prepare for life, work, and nationality by developing knowledge and skills important for society. VR is measured a critical learning aid in this digitally advanced era [A., Herst (2018)]. To authenticate the linking between the learning paradigms and virtual reality, it is necessary to examine the key factors behind the learning paradigms like behaviorism, cognitivism, constructivism [Schunk D.H. (2012)], connectivism [Siemens G. (2014)], and experientialism [A.Y., D.A. (2012)].

### Explanation of Learning Paradigms

#### Categories:

*Behaviorism:* This category is one of the oldest and most popular theories in education. It insists that learning happens through observation from the environment through which one's behavior changes. (Ref. Clark 2018)

*Cognitivism:* This category allows users to add new information to their existing knowledge. (Ref. Schunk, 2012)

*Constructivism:* A learning process in which the learners act as information constructors. (Ref. Fosnot 2013)

*Connectivism:* A continuous learning system in which the learners gain knowledge outside the traditional setting with the help of technology tools. (Ref. Siemens, 2014)

*Experientialism:* Learner's personal experience contributes the most for knowledge acquisition, whereas the teacher acts as a facilitator. (Ref. Kolb & Kolb, 2012)

## LITERATURE REVIEW

What are the Studies Specific Features about Virtual Reality in Education?

The learning technique has to be interactive, challenging, inspiring. There are several models used in implementing such tools in the teaching space. It is found that using 3-D media

[Ikhsan, J. (2019)], that VR has been used as a practical learning media. Chemistry trainers, learners, peer reviewers, broadcasting experts, and material experts have assessed the media in VR learning content with Android-based application.

A related reading in a chemistry research using Leap motion and Head-mounted demonstration [Fong, S (2017)] was used to make a wireless broadcast technology with a server and client connectivity [A.W., Beavis(2019)] in conveying learning information to pupils. In experimental chemistry study, leap motion was used to make the human interact with entities in the virtual environment to carry out experiments. It is detected that a high level of tracking accuracy is essential to attain such experiments [Han, J.(2017)].

The physics tool Virtual Environment for Radiotherapy Training (VERT) is a simulation environment to train radiotherapy concepts. Complex concepts such as radiometry practices are also taught in this technique to the trainees. VERT also deals mixed learning in the classroom. VERT potentially helped the trainees handle the radiotherapy tools [Herst A.(2018)].

A study was conducted to demonstrate to learners the usage of the Infrared spectrometer and its purpose in examining the resulting spectrum with Samsung Gear VR's aid under the faculty observation [Gurnsey A.D. 2020]. The learners in this study have volunteered themselves with curiosity. This study's individuality is that the VR instructional learning is made available for Google Cardboard and Gear VR with IOS and Android support. An increase in learner's enthusiasm to attend laboratories is found as outcome of this study.

A study shown at the University of Texas at Tyler [Coyne, L 2018] with 18 pharmacy students to assess team-based learning using Steam VR software and Vive headset proved that 94.4% are interested to learn in such a team-based learning environment. It also conveyed that VR is entertaining, engaging, and immersive.

Google expeditions VR system was introduced to a group of intermediate school children, and their familiarities were accessed using a set of questionnaires. The outcomes showed an important rise in the group scores that used VR than the traditional method group. [Bowen, M.M. (2018)]

In a particular research, CAVE (Cave Automated Virtual Environment) was used in picking between two dissimilar building layouts [Bakr A.F. (2018)]. This study suggests that VR is a tool that improves the visual perception and competence of children.

Several categories of learning content framework were identified during the coding process, as given in Table 3.

**Table 3: Learning Content Framework**

Type	Description
Analytical	Whether the application of VR will enable students to develop analytical skills such as data collection and interpretation, programming, or complex decision-making
Practical Experience	Where the use of VR tries to help students understand and accept procedures like how to carry out surgery or firefighting procedures
Communication and Team-Building	If VR seeks to enhance students' potential to collaborate as a team or develop their leadership abilities (for example, to introduce themselves to a recruiter), it is meant as communication.
Domain-Specific Knowledge	A subject where deeper understating of the concepts are explained with the help of VR

## POSITIVE IMPACTS OF USING VR IN EDUCATION

In the educational perspective, VR is generally preferred to simulate a classroom or lab. Experiments that contain high difficulty levels are safely presented with VR. [Christou, C. (2010)] VR plays a vital role in the education and training industry. Implementation of a learning setup for each course or subject needs a lot of funding and space. Virtual Reality has bridged this gap by creating custom course content for each learning environment. VR has its benefit by improvising learner psychomotor, cognitive skills.

## DISCUSSION

This detailed analysis demonstrates that the learners are very much involved in using virtual reality technologies that shows that VR is a promising technology. Most of the studies were focused on the learners' interest, motivation, and engagement.

The identified studies reveal that VR tool motivates and increases the engagement of students.

All the studies were conducted for a certain period, but there is no specific methodology to integrate VR into regular teaching-learning practice. Mapping the learning theories with the VR content is found missing in the majority of the studies.

Virtual Reality technology is a vast and advanced area explored by numerous researchers across the globe. The studies' implications show that if the educational institutions' stakeholders carefully choose the required VR content for the courses, they

can achieve good results. It is also wiser to start with low-end VR devices rather than investing a huge amount on the infrastructure until teachers and students get familiar with the usage.

## CONCLUSION AND FUTURE WORK

Technology is rapidly growing, the use of resources is also expanding. Trainers can make use of the free resources related to their subjects, perhaps with low cost mobile-enabled VR devices like Google cardboard before they could step up for a huge investment. The extension of this work will emphasis on surveying the institutional heads and instructors to identify their level of readiness to adopt this technology.

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# Big Data and Security Challenges

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## ABSTRACT

*The uses of internet and surfing of social media sites like facebook, twitter, instagram etc. is increasing day by day. In almost every section of society the internet becomes essential. With this increase in usage of these applications the volume of data is growing with very fast pace. Whenever using or surfing internet a huge amount of data is produced. In most of the cases the data is most important asset for organizations. The continuous growth in the volume of important data has created some problems that need to be addressed intelligently. Handling of such a huge volume of data by using traditional methods and software's is almost impossible or at least very difficult and time consuming. To sort out this problem of data handling as well as security of data new techniques or methods needs to be adopted. This problem is somehow solved by a new concept called Big Data. This paper presents in-depth explanation of big data and its security challenges.*

**Keywords:** Big Data, Big Data Analytics, MapReduce, Hadoop.

## INTRODUCTION

Use of Internet is regularly increasing very fast from last few years. As a result of increasing use of internet, the rate of growth of internet data is very high. Due to the development of various mobile and internet applications, social networking sites like facebook, twitter etc., big data has become an important topic of discussion and research throughout the world. Big data is actually data which is so voluminous that traditional applications and software's for data processing are not able to deal with this huge amount of data properly. Maintaining of such a huge volume of data is very difficult or almost impossible by adopting traditional methods, at the same time, this much heavy volume of data faces security and privacy protection during utilizing, collecting, storing, and analyzing.<sup>[1]</sup>



Following is the list of big data dimensions:

1. Volume
2. Velocity
3. Variety
4. Veracity
5. Value

**Volume:**

The amount of data is now a day's reached very high in volume and is now in incomprehensible proportions. Various social media applications and other networks are generating data which is increasing day by day in volume. The data may be structured or unstructured whatever type of data may be. Most of this data may be extremely important for organizations as it can be used to get valuable insights and help them to take better strategic decisions. Almost every organization is sending email messages, twitter tweets, various photos and videos etc. At very fast speed these are increasing day by day. The using of this data by unauthorized people may be harmful. It may be possible that any unauthorized person intercept and copy the important information. It is necessary to protect the data from unauthorized copying.

**Velocity:**

The data is continuously produced everywhere around the world and the amount of production of data is very large. The growth of the data is continuous and very high.

The term 'velocity' refers rate of generation of data or how fast the data is generated. The data is processed to meet the demands and the challenges. This means that speed of the data being produced and with which speed the data needs to be processed to meet the demand. Dimensions that define the characteristics of data are also important in case of Big Data. If it is structured data or unstructured data all are growing with a very fast rate.

**Variety:**

Today, data is produced in so many types of formats. That may be Structured, numeric data or in traditional databases. It may be unstructured text documents, email, video, audio, stock ticker data and financial transactions. It is important to find out the ways of governing, merging and managing different forms of data.

**Veracity:**

The term veracity refers to the standard of the big data and its reliability. Veracity represents the quality and reliability of the data.

**Value:**

Value represents the context and usefulness of data for decision making, whereas the volume, velocity, variety and veracity focus more on representing challenges in big data. For example, Facebook and Google have leveraged the value of big data via analytics in their respective products.

## STAGES INVOLVED IN BIG DATA

### **Data Acquisition:**

Data Acquisition is basically the process of collecting, filtering and cleaning the data. A major part of this data may be discarded being of no use or less important use. However, being its unstructured form discarding that part of data may be a challenge.

### **Data Extraction:**

It is the next step, all of the generated data that is acquired may not be much useful as it may contain large amount of redundant data or not much important data. The challenge in data extraction is the nature of generated data hence to decide which part of data to be discarded and which portion of data is required to be kept.

### **Data Collation:**

Data from a single source may not be sufficient for prediction. More than one source of data should be combined and analysed.

### **Data Structuring:**

It is another step after aggregation, data should be stored for further use in structured format. For big data it is very important to provide real time results. Hence structuring of the data should be continuous and fast.

### **Data Visualization:**

After all the data is structured, it should be available in a visual format.

### **Data Interpretation:**

It is final step of big data that includes taking valuable information from the processed data after proper interpretation.<sup>[2][3]</sup>

## BIG DATA ARCHITECTURE

In this section, we present architecture of MapReduce and Hadoop that are used to process big data. Moreover, understanding the architecture of Big Data is essential to design approaches to provide security and privacy in Big Data. MapReduce is the core component of the Hadoop Apache software framework and is a type of programming model that can be implemented in various of languages. The function of these tools is to divide data into smaller fragments or blocks after that they are sent to nodes in a cluster or map. It uses a map function that filters, sort, and distribute jobs to various nodes and also uses a reduce function to collect the results from those jobs so that the problem is solved.

The Map Reduce is a combination of a job tracker, task tracker and a job history server. The job tracker is used for managing the resources and may be considered as the master node that manages resources. MapReduce normally works parallel in the vast cluster sizes, while jobs can be divided across many different servers.

**Map Reduce** consists of two main parts. The **Map** and the second part **Reduce**. Following is the functions of these two parts :

**The Map:**

This part of MapReduce sorts and filters the data and then categorizes the data for making it easy to analyse it.

**The Reduce:**

This part is actually to merge all the data together and make the summary available for further processing.

Another important management software framework is Hadoop which plays a very important role in analyzing the big data. Hadoop is a framework that is capable of cataloging, managing, distributing unstructured large data sets with a high speed across many nodes. Normally HDFS, (Hadoop distributed file storage system) is used for storage which divides data into blocks that is distributed and stored on multiple nodes. Hadoop uses MapReduce that break the data for the nodes to process and sort in parallel. The map procedure filter, sort and then reduce procedure. It is capable of processing the data with a very high speed hence is having a very high transfer rate and simultaneously is capable of uninterrupted operation.

A basic Hadoop network structure normally consists a slave, master and a client. The client is actually a user interface or query engine. The job tracker is defined as the software job tracking system that is required to transfer request search queries (tasks) to the task tracker nodes so the end user can perform information analysis on the result.

**Apache Hadoop** being a framework gives facility for parallel data processing and distributed storage of the data.<sup>[4][5]</sup>

**APPLICATIONS OF BIG DATA**

Big data has many applications in various industries. Now we will discuss about some important applications in brief:

**Fraud detection**

Big data is useful in fraud finding. It helps in Risk analysis, managing frauds and abnormal trading analysis.

**Advertising and marketing**

**Advertising** agencies uses big data to understand the patterns of user behaviour and then collect information about consumers' motivations.

**Natural Language Processing (NLP)**

It is the study of designing programs that can understand verbal and written communications. Selecting meaningful information from huge volumes of unstructured data is a Big Data issue. The unstructured data such as text messages, audio messages, emails, etc. is increasing exponentially.

### **Human Behaviour Monitoring**

Data is generated from everything we do. Every activity produces data. Emotions produce data, sentiments also produce data, Relationships and interactions, Speech, Offline and back-office activities, culture, etc are activities that may generate a huge set of data.

### **Geographic Information System (GIS)**

GIS is a powerful system; it is designed to make better decision about the location. It includes store, manipulate, manage, collect, sort, select geographical data.

### **Medical Science**

Medical field is generating a huge amount of unstructured data may be Genetic or genomic, internal imaging or motion picture, treatment or life course assessment. There is a requirement of Big Data technology that can capture all the data about every patient. The big data technique can be used to handle data produced during the entire patient medical history.

### **Traffic Data Monitoring**

Data analysis is useful for improving network resources such as capacity planning, route profiling, fixing network problems, and congestion management, etc. These are the applications which are also producing huge volume of data.

### **Weather Forecasting**

Now a days, satellite sensors and other resources are used for weather forecasting. The volume of environmental data is also generated with a very fast speed and in a huge volume.

### **Multimedia**

Multimedia is an application which now a days generating data with very fast speed and huge in volume. The data produced by multimedia may be texts, audio, video, images, graphic objects, animation sequence, etc.

## **BIG DATA ANALYTICS**

In big data examining large amount of data that is having different types of data is called Big Data Analytics. It examines the pattern of data, market trends, customer preferences and similar other information. Final result of analytic helps in effective marketing, opening new opportunities etc. The big data analytics help business organizations to make changes in business strategies accordingly.

Big data applications normally work in real-time. These applications have to process large amount of data which produces a great deal of volume and demand on the network. If we consider the data from a networking perspective, many different areas are needed to be explored. For example, network topology optimization, parallel structures and big data processing algorithms may be the areas included as well as data retrieval, security, and privacy issues etc may also be included. The big data is a new exciting field of research among the IT community and will be requiring much attention for the years to come. Normally organizations may have limited network infrastructure and resources available

to handle huge volumes of traffic flow that may cause regular services (e.g., Email, Web browsing, video streaming) to become strained. This can reduce network performance affecting bandwidth and exposing hardware limitations of devices such as firewall processing being overwhelmed, providing security and privacy has also become a major concern in Big Data as several real-time applications are used.<sup>[6]</sup>

## **SIGNIFICANCE OF BIG DATA ANALYTICS**

The Big data analytics in the field of Information Technology is like a revolution. This examines large amounts of data to find hidden patterns and correlations among the data samples.

- Big data analytics is very significant in the field of Scientific Research. Big Data has triggered a revolution in scientific thinking and methods.
- Big data analytics has a great significance in helping people to predict the future.
- Big data analytics has a great impact on Industrial Revolution.
- Big data analytics has a huge impact on Education Industry. For example, Customized and dynamic learning programs, Reframing course material, Grading Systems, Career prediction etc.
- Big Data Analytics in Banking Sector. For example, big data can be used to detect misuse of credit and debit cards, Risk Mitigation etc.
- Big Data Analytics in Government Industry.
- Big Data Analytics in Insurance Industry. For example, big data can be used to collect information, gaining customer insight, fraud detection etc.
- Big Data Analytics in Healthcare.

## **SECURITY CHALLENGES OF BIG DATA ANALYTICS**

### **1. Authentication**

Authentication is actually a process that determines the identity of the users. It ensures that the user is genuine or not.

### **2. Authorization**

Authorization is the process that ensures which permissions a person is allowed to have.

### **3. Data Protection**

Is the process which ensures that only authorized users have ability to access the information when required? It is necessary to guarantee that data is properly protected from modification or disclosure.

### **4. Auditing**

Security auditing of data is a systematic technical assessment of a system that ensures a permanent record about when and who did at which time. Organizations are required

to use a way to protect, properly utilize, and gain real-time insight to achieve secure big data.

#### **5. Vulnerability to fake data generation**

First of all, it is important to mention the concerns of fake data generation. That undermine the quality of big data analysis. Cybercriminals try to fabricate false data and 'pour' it into the data lake.

#### **6. Potential presence of untrusted mappers**

Once big data is available and collected, it undergoes parallel processing. MapReduce paradigm is one of the methods used here. After the data is split into numerous bulks, a mapper processes them and sends to desired storage options. If an unauthorized outsider has access to data, they can change the settings or misuse the data.

#### **7. Possibility of sensitive information mining**

Perimeter-based security is normally used for protecting big data. It means that entries and exit points are properly secured.

#### **8. Absent security audits**

Security audits are required to help companies gain awareness of security gaps and it is advised to perform audits on a regular basis, this is rarely done in reality. Working with big data has many challenges, and an audit would only add to the list.

Nowadays in Big Data, cyber-attacks are increasing, this is because the existing traditional methods of security are not capable to detect these attacks. However, there are several systems to detect different types of attacks but they are not able to detect and prevent all type of attacks. They are not able to detect recent unknown type of threats. They do not provide real time solutions to handle these challenges.<sup>[7]</sup>

As big data becomes more popular, network growing in size and complexity, so the issue of security is becoming increasingly crucial. Many cyber-attacks have started to focus on big data and cloud architecture.

The obvious and general risks associated with big data environments include: discovering new vulnerabilities large cluster node attack surfaces. Organizations are not prepared to observe inadequate knowledge of server hardening, poor user authentication and weak remote access policies, inability to handle large processing of audit/access logs.<sup>[8]</sup>

## **CONCLUSION**

Big Data has made a great impact on every field of life. In this paper, we have reviewed significance and security challenges of big data analytics. Security and protection is very important in big data analytics for providing quality of service in big data networks. Mostly big data applications work in real-time. These applications need to store and process huge amount of information which produces a large amount of volume. Organizations have a big responsibility to handle their big data in a way that protects data. Various necessary steps need to be taken to improve the security and privacy in big data.

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# Role of Puppetry in Education

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## ABSTRACT

*When children escape into the free realm of fun fantasy, they glisten with light. Children of all ages and from all cultural backgrounds can awaken their creative foundation by having the chance to explore the imaginative world of their exploratory and inquisitive brains. Puppets give their imagination a concrete, almost real-life character in a dream world that takes the form of faces and facial expressions, voices, colours, and textures. It is unarguable that puppetry plays a crucial role in teaching. Puppets' impact on students' perceptions, however, is greatly influenced by how they are used and presented. However, life is not a fantasy realm, as is the case in reality. All throughout their lives, children are exposed to various physical and emotional dangers. Children learn while they play in an unintentional and non-threatening way when puppetry is used as a teaching tool. The logical progression from playing to learning gives puppets new significance. Puppets give children opportunity to put together, acquire, and comprehend a variety of ideas, skills, knowledge, and circumstances, which substantially aids in the growth of their learning. In addition to stimulating and reinforcing the child's learning, puppetry offers a plethora of concrete experiences that are connected to a purposeful action. Pre-primary, primary, and high schools in South Africa all have puppetry on display, and puppets are frequently used in a variety of disciplines to educate students of all ages. Determine the visual and tactile attraction of puppets used with foundation phase learners is the aim of this research project.*

**Keywords:** Pedagogical Puppetry, Educational Methods, Elementary-Secondary Education, Integrated Learning.

## INTRODUCTION

Puppetry as a form of art has developed from a one-time entertainment medium to an educational tool for kids. The educational process has benefited greatly from puppetry and



the usage of puppets. Puppets have played a significant part in all kinds of cultural ceremonies for millennia, helping to convey a message through animation. Puppets are effective educational tools, but schools might employ them more frequently to fully realise their potential. Korosec (2013), for instance, notes that although many instructors in Slovenian schools have a generally favourable attitude toward the use of puppets in the classroom, this practise is not common. One factor might be that educators lack sufficient experience using puppets and understanding their benefits. There is not a lot of thorough research showing the considerable advantages of employing puppets or puppetry in teaching that is available in English. Case studies, uncontrolled evaluation studies, or brief instructional interventions are the primary sources of the evidence.

This review's objective is to thoroughly examine the available data regarding the alleged advantages and potential applications of puppetry in education. In this study, academic research that are related to formal education are the main subject. By creating a theoretical framework within which to discuss the advantages and potential of puppets as teaching aids, the findings are synthesised. This research study's objective is to assess how foundation phase educators and students see the usefulness of puppets. It outlines the effects of the many components of puppets as a teaching instrument and puppetry as a method of education.

## **IMPORTANCE OF PUPPETRY IN TEACHING LEARNING**

Almost every civilization still practises puppetry, which is a very old and traditional type of art. Puppetry is employed in a variety of settings, including religious, cultural, and educational settings. Puppetry is a theatrical or performing art that involves the control of puppets. It is a very old art form that is thought to have been created around 3000 years ago. Since the beginning of human civilization, puppets have been used to animate and communicate the needs and desires of human communities. Almost all human societies employ puppetry both as a form of entertainment (in performances) and ceremonially (in rites and festivities like carnivals). Most puppetry entails telling stories. According to Burn [10], puppets have brought people from all around the world together by using a puppetry-specific language that is more than just words. Puppetry is a language that uses a combination of gestures and words to express feelings, beliefs, and desires (As cited in [11]). All puppets have characters that come to life and can represent diverse personalities and traits; they also transcend all cultural boundaries.

## **ADVANTAGES OF PUPPETS IN EDUCATION**

### **Puppetry as an Educational Tool**

Education of the kids is the main goal of using puppetry in pedagogy. Young minds can be moulded in any direction at such a young age, and a variety of techniques are employed to encourage creative creativity in them as well as the growth of their observational and exploratory skills. A teacher must work very hard to provide the young students with the tools that will not only create a thirst for knowledge but also inspire them to discover the gems of education.

## **Teaching Ethics and Values**

If a person frequently makes mistakes or participates in activities that go against social norms, their education is called into question. It is impossible to overstate the role of education in instilling good morals and values in children from an early age. Since schools are where children spend the most of their time, the setting must foster in them an understanding of right and wrong as well as ethical ideals. Puppetry can be a useful tool for teaching students, lessons and imparting values.

The usage of puppetry in the classroom makes it simple to focus on a student's intellect.

## **Reinforcing Good Behavior Using Puppetry**

The motivation behind people's good behavior and leadership abilities is education. Education has unavoidable benefits that leave an everlasting impression on a person's persona, and it plays a significant part in promoting good behavior in students. When it comes to instilling ideas in kids that help them develop mannerisms and attitudes, the value of puppetry in teaching cannot be understated.

## **Understanding Sensitive Topics**

Teaching kids about delicate and difficult subjects like sexuality, domestic violence, sexual assault, etc. is one of the most difficult duties for instructors. It is imperative that teachers educate pupils about difficult subjects when they are young because that is when people begin to form opinions. Teachers use puppetry as a teaching tool to help pupils understand the nuances of such topics without having a detrimental influence on their views. At this point, adolescents experience behavioral changes that play a significant role in forming their personalities. Therefore, it is crucial to educate children more effectively in order to instill a positive attitude in them, which is where puppetry in education plays a key part.

## **Participating in Craftwork**

Together with your preschooler, create a puppet show. Create a beautiful background by using cardboard cutouts, stickers, and kid-friendly paint. Make sure your youngster decides on the theme and gets involved in the decoration. You and your partner can create your own puppets. Once everything is prepared, set up the puppet stage in her activity space and schedule daily puppet time. Additionally, you might ask your child to bring her friends and put on a talkative puppet show for everyone's enjoyment.

## **Enjoying Companionship**

Puppets are viewed as friends and companions by children. Puppets are therefore excellent for calming down hyperactive kids. Additionally, you can sing to your youngster or use puppets to gently and humorously correct him while still chastising him. My kid is quite devoted to her kangaroo puppet and actually listens more to the puppet than to me, says Caroline Paul, a preschooler's mother from Chennai.

### **Developing Multiple skills**

Puppet handling and manipulation aid in the development of both gross and fine motor skills in children. In her piece, author A Greensmith states, "Children with unique educational challenges can benefit from puppets. Children that struggle with interaction and communication can be encouraged and supported by them. They can meet each child's specific visual, tactile, and emotional demands while also assisting in the development of their social and motor abilities."

Is your youngster reserved and wary of her surroundings? Is she finding it difficult to socialise or communicate with others? Playing with puppets might encourage your child to speak up more, get over her shyness, and gain self-confidence.

### **Learning is Fun with Puppetry**

The kids enjoy puppets because they are an attractive language teaching resources in pre-school education. The puppets capture the children's interest in the lesson and create a fun setting that makes learning easier, so they raise their hands to participate in the lesson and answer the questions. The puppets undoubtedly have a favourable impact on children's perceptions of the world. Puppets assist in making the kids feel more at ease and encourage them to explore their surroundings. The youngsters feel protected and secure because of the entertaining environment the puppets create. According to Mishina and Wallace [11], the use of puppets can help to lessen the rigid barrier that exists between the teacher and the students in the classroom. In lessons where puppets are employed as a teaching tool, both the teacher and the pupils enjoy themselves

### **CONCLUSION**

All these benefits of employing puppets in English-language classes can be summed up by saying that, if used frequently and purposefully by kindergarten instructors, puppets are fantastic language teaching instruments. The puppets not only help the kids learn, but they also make the classroom fun for everyone. Children get increased self-assurance for their academic future. Since youngsters feel more at ease conversing with the puppets than an adult or teacher, they improve their communication abilities. Additionally, the puppets' fun environment helps to remove barriers between the teacher and the students. If puppets are used properly in the classroom, both the teachers and the students profit. Puppetry activities help children's growth and brighten up the playing and learning atmosphere, say the child care provider and instructor. Puppet shows are also a significant component of edutainment in early childhood care and education.

As a result, a clearer picture of the advantages of puppetry activities in early childhood programmes has been presented in this research. Puppet plays should be promoted by childcare providers, teachers, early childhood centre management, curriculum developers, parents, guardians, and the community as a way to foster children's holistic development. Puppet theatre performances can be used as an aesthetic appreciation for kids to understand the importance of puppetry after the usage of puppets as educational instruments.

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# Education for Sustainable Development

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## ABSTRACT

*In everyday language, we often say that a person has "a lot of personality." As you can probably guess, this is not how psychologists use the word. When I was much younger, a person going on a blind date might be told that the person they were meeting had "a great personality." Psychologists don't use the term this way either but let's use this example of a blind date to see what psychologists really do mean by personality.*

**Keywords:** Personality, Personality assessment, Extraversion, Introversion.

## INTRODUCTION

Education develop personality of an individual in all field's and aspect's making him intelligent, learned, bold, courageous, possessing, strong good character and it develops the ability of better adjustment of a person human in any situation's. ,

In everyday language, we often say that a person has "a lot of personality." As you can probably guess, this is not how psychologists use the word. When I was much younger, a person going on a blind date might be told that the person they were meeting had "a great personality." Psychologists don't use the term this way either but let's use this example of a blind date to see what psychologists really do mean by personality.

Obviously, this isn't a practical solution because it would take a fleet of trucks just to deliver the information. It would also take you years just to look it over. What you'd like is a brief, elegant description of the person. "Elegant" is being used here in its scientific sense. In this context, it means precise and exact. A good description should allow you to predict what the person would do in a variety of situations. As scientists, we try to determine what

that description should look like. We also want to develop tests that will create a description of each person's personality.

## PERSONALITY

**Personality** – Personality is described in terms of an individual behavior his action, posture, words and attitude and opinions regarding his external world. But personality may be more basically described in the term of the individual's covert feeling about his external world, feeling that may not be apparent or discernible in his overt behavior also in term of one's about oneself.

By personality then, we mean the relatively stable pattern of behavior that the person shows in a wide variety of situations. How can we best give a brief, elegant description of what a person is like? One approach to describing personality that has been around for a very long time is called type theory.

The term "Personality" is derived from the Latin word *persona* which was the name given to the masks the actor wore and the characters they portrayed. Personality is a dynamic organization, inside the person, of psychophysical systems that create the person's characteristic patterns of behaviour, thoughts and feelings.

Personality is about our different ways of being human. How are all variations on the same themes. How the human nature we all share manifests in different styles of thinking, feeling and acting?

According to **Allport**, "Personality is the dynamic organisation with an individual of those psycho-physical systems that determine his unique adjustment to his environment".

According to **Morton Prince**, "Personality is the sum total of the biological innate dispositions impulses, tendencies, aptitudes and instincts of the individual, and the dispositions and tendencies acquired by experiences".

**Mischel, Shoda and Smith**, "State that the term personality has many definitions, but no single meaning is accepted universally. In popular usage, personality is often equated with social skill and effectiveness. In this usage, personality is the ability to elicit positive reactions from other people in one's typical dealings with them. Some definitions by known personality psychologists are presented below.

## TYPES OF PERSONALITY

- (i) **Extraversion** the tendency to seek and engage with the company of others.
- (ii) **Introversion** the tendency to avoid the company of others and to withdraw from social situations.
- (iii) **Neuroticism** the tendency to be worried and anxious.

## PERSONALITY ASSESSMENT—MEASURING

As we discussed earlier in this chapter, personality theorists want to do two things. One is to describe what a useful personality description would look like. The other is to create a

test that will give us that description for each person. We call this second task personality assessment. In our discussion of psychological tests, we talked about reliability and validity. A test is reliable if it measures something consistently. A test is valid if it measures what it is supposed to measure. Like any other test, personality tests must be both reliable and valid to be of any use. We have been looking at a number of different theories about human personality. Now let's look at four different ways that we might measure someone's personality. Personality can be measured using direct observation, interviews, rating scales, and by the administration of personality questionnaires. Psychological tests may be objective or projective.

### **1. Direct Observation**

Do you consider yourself a "people watcher?" Observing people in public is a common hobby. The trouble with simply watching people is that it's easy to make mistakes about what they are doing and why they are doing it. If you see a person get angry with someone, it's hard to know why. They could be angry about something that happened earlier rather than what just occurred. They could be more or less angry than they actually appear to be. They could even be pretending to be angry.

### **2. Behavioral Assessment—Counting Behaviors**

One way of improving the reliability of observations is to do a behavioral assessment. In behavioral assessment, an observer makes a count of specific behaviors that people perform while being observed. In watching children, for example, we might count aggressive acts, laughter, crying, or helping behaviors. With a group of mental patients, we might record disturbed speech, hallucinations, bizarre behavior, or aggression. Cognitive psychologists sometimes ask people to count and record negative and positive thoughts about themselves. In one study, students who suffered from math anxiety were asked to think out loud while solving math problems. The researchers then classified and counted their responses to find out more about what caused their anxiety.

### **3. Situational Testing**

In situational testing, a person is observed while doing a specific task. The situation is usually fairly narrow. The purpose of this kind of testing is to find out how someone behaves in a specific situation. The military has used situational testing to see how people respond to difficult command situations. In one test, officer candidates were asked to supervise a construction crew (Murray, 1946). They didn't know it but the crew had been instructed to be as difficult and insubordinate as possible. Such a test could tell a lot about how people handle difficult situations. On the other hand, no two people will face exactly the same test so the test will always be somewhat unfair. Another example of situational testing is the "Shoot-Don't Shoot Test" given to police officers around the country. The officers are put in simulated situations that require them to decide whether deadly force is appropriate. This test not only measures the personality of the officers; it helps them train for similar situations in the real world.



#### 4. Interviews

In an interview, we have better control of the situation than we do in a behavioral assessment. To gain this, we create a more artificial situation. The interviewer asks a series of questions and the person being tested answers them. If it is a structured interview, the list of questions is set in advance and always asked in a specific order. In an unstructured interview, the interviewer is free to make up questions on the spot and to follow up on interesting comments made by the person being tested. This means that an unstructured interview is more flexible but it may also be less scientific and somewhat unfair. This is because each person interviewed is treated differently.

#### 5. Rating Scales

Rather than interviewing a person, we might use a rating scale. We could ask the person, for example, to do a self-rating on a number of traits. The rating is usually on a numeric scale (from 1 to 10, for example). If we are worried that the person might not be honest, we might ask others to rate him or her for us. Sometimes interviews and rating scales are combined. At the end of some interviews, the interviewer fills out a rating scale.

#### 6. Personality Structure

According to Allport traits play a very significant role in the structure of personality. We shall explain these traits in detail as follows-

### PERSONALITY TRAITS

As we have made it a little clear in the foregone pages that traits are some specific mental structures in human beings. Allport says that "A trait is a generalized and focalised neuro-physic system (peculiar to the individual with the capacity to render many stimuli functionally equivalent to initiate and guide consistent forms of adaptive and expressive behaviour. Allport gave some special features of traits: -

- Traits are essential to every individual's life.
- Traits are not visible but they are neuro physical structures.
- They are not cognizable by sight but they are to be inferred by consistency of behaviour.
- The consistency in behaviours of human beings is based on traits.
- Traits are not completely independent. Whatever traits are found in the personality of man, are found to be inter-related.
- Different people have different degrees of traits.

### TYPES OF TRAITS

#### Allport Gives Three Types of Traits

**1. Cardinal Traits-** These are the traits generally found in everyone. They may be known through historical characters too. These are the fundamental traits of human personality.

Man organises his life through these traits. Examples of such traits are-strength, achievements and sacrifice for others, etc.

**2. Central Traits-** Central traits are those tendencies of a person that can be recognised just by looking at the person. For example, extrovert nature of a person, extrovert mentality, sociability, enthusiasm for life, honesty and dutifulness, etc.

**3. Secondary Traits-** Secondary traits include specific habits, life-style, eating habits, tendencies and preferences, etc. According to Allport people are different generally on the basis of the different traits of this category. The three types of traits discussed above constitute personality which determines the behaviour of persons.

**Allport** finds the constitution of personality mainly responsible for the behaviour of a person rather than environmental conditions. He exemplifies this point saying that the same fire melts butter but hardens an egg. Here fire is the same stimulus but its effects are different. Similarly, people living in the same environmental conditions behave differently which is owing to their personality structures. Apart from above mentioned traits Allport discusses two more traits- individual traits and general traits. For the people of one society or culture these traits are common. For example, to some people of one society we may call humble and to some others as aggressive. The thinking behind the existence of such traits is that societies have specific cultures and specific effects. To adjust to them people adopt common techniques. The examples of such traits are social tendencies, worries, social customs and traditions, values, etc.

According to **Murray**- "Personality is the continuity of those functional forms and forces that keep expressing itself through organised, powerful processes and busy behaviours throughout life and till death."

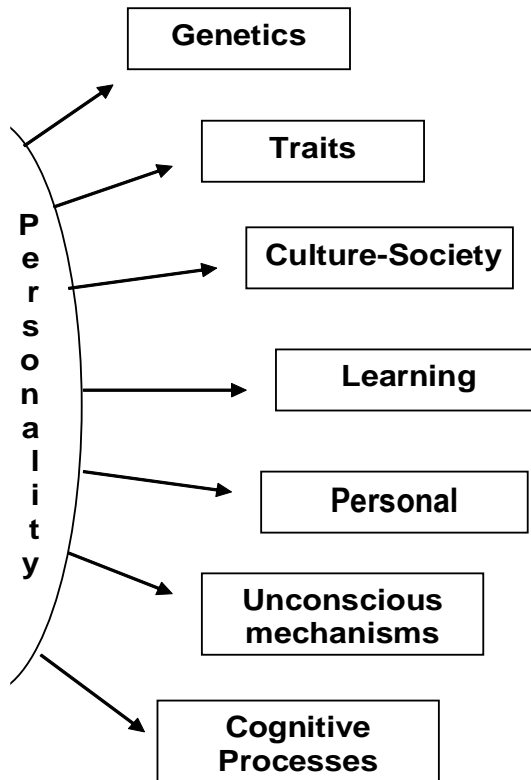
## **CHARACTERISTICS OR FEATURES OF PERSONALITY**

- 1. Personality is Something Unique and Unparalleled:** Every human is different from other humans. Every human is different and unique from others. It is true that I Learn topics. I would follow that the same family. The notion that this is an indication that the person. Properties pattern of interests is an organization that is different from other people. It is a reflection of the personality traits of people in individual identity.
- 2. Integration of All Psychophysical Systems:** Person all the physical, mental, social and moral qualities are organized by themselves I have stability. Compilation and organization means a simple sum or symptoms add and subtract, etc. is not stored.
- 3. Personality is Dynamic:** It is not like a static or static object, however personality enough for the real and the stability are still signs of where it would be unfair to a person's entire life span I - or to learn to live with as it is.
- 4. Product of Heredity and Environment:** Overall personality development requires both strong role and mutual end action is.

5. **An Integrated Whole:** Various psychological and behavioral aspects of life organized for mediocrity is required to function. Personalities from various sides or one side of the various procedures I compile any cause or organization are many mental disorders.
6. **Influenced by Training and Experiences:** Positive climate-related conditions and proper personal grooming I will assist.
7. **Personality and Character are not Synonymous:** "Personality" is a psychologist; the person is the main relationship. "Character" is related to strategic cultural values of society than is found. The second personality a comprehensive, broad subject, which I as an item of this character I is inserted. Many psychologists do not agree with the personality of the character as a side thought I should go.
8. **Personality is Bi-Dimensional:** One is overt and second is converting.
9. **Self-Awareness:** The most important attributes of personality. This self-consciousness caused the "person" is. Or simply may be called personality. This particular. Remarkable properties of the human animal and makes it different from other organisms.
10. **Behavior Can Be Predicted:** The reason for this stability of personality traits and thanks is to have.
11. **Personality Represents Totality of Individual:** In other words, full of personality, a personality, behavior and the interpretation is that the sum of the overall properties.

## PERSONALITY AS A COMPOSITE OF FACTORS

Because almost every theory of personality contains elements of all of the explanations just reviewed, perhaps it is safe to say that personality is a function of all of them. The elements emphasized depend on which theory of personality one considers. Assuming that, the situation can be summarized as follows:-



Personality has three aspects', biological, psychological and sociological while biological aspect of human life is maintained and transmitted by nutrition and reproduction, the psychological and social aspect of human life maintained and transmitted by education. Because personality gives a complete picture of human behaviour by involving all of it's aspects – conative, cognitive and affective.

In contemporary psychology, the “**Big Five**” factors of personality are five broad domains or dimensions of personality which are used to describe human personality.

*The Big Five factors and their constituent traits can be summarized as:*

1. **Openness** –Appreciation for art, emotion, adventure, unusual ideas, curiosity, and variety of experience.
2. **Conscientiousness** –A tendency to show self-discipline, act dutifully, and aim for achievement; planned rather than spontaneous behavior.
3. **Extraversion** –Energy, positive emotions, surgency, and the tendency to seek stimulation in the company of others.
4. **Agreeableness** –A tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others.

- 5. Neuroticism** –A tendency to experience unpleasant emotions easily, such as anger, anxiety, depression, or vulnerability.

The Big Five model is a comprehensive, empirical, data-driven research finding. Identifying the traits and structure of human personality has been one of the most fundamental goals in all of psychology. The five broad factors were discovered and defined by several independent sets of researchers.

At least four sets of researchers have worked independently for decades on this problem and have identified generally the same Big Five factors: Tupes & Cristal were first, followed by Goldberg at the Oregon Research Institute, Cattell at the University of Illinois, and Costa and McCrae at the National Institutes of Health. These four sets of researchers used somewhat different methods in finding the five traits, and thus each set of five factors has somewhat different names and definitions. However, all have been found to be highly inter-correlated and factor-analytically aligned.

### **1. Openness to experience:**

**Openness** is a general appreciation for art, emotion, adventure, unusual ideas, imagination, curiosity, and variety of experience. The trait distinguishes imaginative people from down-to-earth, conventional people. People who are open to experience are intellectually curious, appreciative of art, and sensitive to beauty. They tend to be, compared to closed people, more creative and more aware of their feelings. They are more likely to hold unconventional beliefs.

People with low scores on openness tend to have more conventional, traditional interests. They prefer the plain, straightforward, and obvious over the complex, ambiguous, and subtle. They may regard the arts and sciences with suspicion or even view these endeavors as uninteresting.

### **2. Conscientiousness:**

Conscientiousness is a tendency to show self-discipline, act dutifully, and aim for achievement against measures or outside expectations. The trait shows a preference for planned rather than spontaneous behavior. It influences the way in which we control, regulate, and direct our impulses.

### **3. Extraversion:**

Extraversion is characterized by positive emotions, surgency, and the tendency to seek out stimulation and the company of others. The trait is marked by pronounced engagement with the external world. Extraverts enjoy being with people, and are often perceived as full of energy. They tend to be enthusiastic, action-oriented individuals who are likely to say "Yes!" or "Let's go!" to opportunities for excitement. In groups they like to talk, assert themselves, and draw attention to themselves. Introverts lack the social exuberance and activity levels of extraverts. They tend to seem quiet, low-key, deliberate, and less involved in the social world. Their lack of social involvement should not be interpreted as shyness or depression. Introverts simply need less stimulation than extraverts and more time alone. They may be very active and energetic, simply not socially.

#### **4. Agreeableness:**

Agreeableness is a tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others. The trait reflects individual differences in general concern for social harmony. Agreeable individuals value getting along with others. They are generally considerate, friendly, generous, helpful, and willing to compromise their interests with others. Agreeable people also have an optimistic view of human nature. They believe people are basically honest, decent, and trustworthy.

Disagreeable individuals place self-interest above getting along with others. They are generally unconcerned with others' well-being, and are less likely to extend themselves for other people. Sometimes their skepticism about others' motives causes them to be suspicious, unfriendly, and uncooperative.

#### **5. Neuroticism:**

Neuroticism is the tendency to experience negative emotions, such as anger, anxiety, or depression. It is sometimes called emotional instability. Those who score high in neuroticism are emotionally reactive and vulnerable to stress. They are more likely to interpret ordinary situations as threatening, and minor frustrations as hopelessly difficult. Their negative emotional reactions tend to persist for unusually long periods of time, which means they are often in a bad mood. These problems in emotional regulation can diminish the ability of a person scoring high on neuroticism to think clearly, make decisions, and cope effectively with stress.

At the other end of the scale, individuals who score low in neuroticism are less easily upset and are less emotionally reactive. They tend to be calm, emotionally stable, and free from persistent negative feelings. Freedom from negative feelings does not mean that low scorers experience a lot of positive feelings.

Neuroticism and stress are both strongly associated with negative affect. When people high in neuroticism encounter stressful events, they tend to experience them as more aversive and react with higher levels of negative affect than those low in this trait. This process "hyper-reactivity," or a large change in negative affect in response to a stressor.

### **EDUCATIONAL IMPLICATIONS**

- Teacher and parents should give healthy and adequate environment to their children to develop their personality. They should be encouraged to think out as many ideas as they can for the solution of a problem.
- Co-curricular activities should be arranged timely in the school, college and institutes for development personality of his students.
- Exhibition and Seminars should be arranged in schools for develop personality of students.
- Self-reliance and self-confidence are some of the qualities that are helpful in develop personality.

- Special programmes should also organized for developing personality, confidence and spontaneity in children.
- Parental meetings should be organized time to time to aware parents about home environment and development of personality in the children.

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# A Brief Introduction of New National Education Policy (NEP) 2020

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## ABSTRACT

*Education is elemental for realizing full human potential, developing an impartial and unbiased society and advancing national development. Providing comprehensive access to quality education is the key to India's continued rise and command on the global stage in terms of economic growth, social justice and equality, scientific progress, national integration, and cultural safeguarding. Universal high-quality education is the most propitious way forward for developing and maximizing our country's ample amount of talents and resources for the good of the individual, the society, the nation and the world. India will have the highest population of youngsters in the world over the next decade, and our ability to provide elevated educational opportunities to them will determine the destiny of our country.*

*The new National Educational Policy 2020 revealed on Wednesday, 29 July, solicits to introduce and implement a sea of changes across all levels of education in India, including the basic apprehension of education in the country. It also seeks to effectuate changes in the way the instructors of such education, schools, colleges and teachers are trained and how they approach education. The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution. Prominence on notional understanding rather than rote learning and learning-for-exams; Innovative and evaluative thought process to encourage logical decision-making and innovation; Morality, individual and fundamental standards like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice.*



**Keywords:** NEP 2020, multidisciplinary education, vocational education.

## INTRODUCTION

Encouraging multilingualism and the power of language in teaching and learning. Life skills such as communication, cooperation, teamwork, and resilience; precisely defined developmental analysis for learning rather than the summative assessment that encourages today's 'coaching culture'. Large-scale operation of applied science in teaching and learning, removing language barriers, increasing access for Divyang students, and educational planning and management. High regard for diversity and respect for the provincial context in all curriculum, pedagogy, and policy, always keeping in mind that education is a concurrent subject; complete fair play and incorporation as the cornerstone of all educational decisions to ensure that all students are able to thrive in the education system. Collaboration in curriculum covering all levels of education from early childhood care and education to school education to higher education. Teachers and faculty as the core of the learning exercise of their recruitment, continuous professional development, positive working environments and service conditions. A 'light but tight' normative structure 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. Magnificent research as a corequisite for outstanding education and development. Steady exploration of progress based on sustained research and regular assessment by educational experts; Considerable speculation in a strong, spirited public education system as well as the encouragement and facilitation of true philanthropic private and community participation.

Another important day to be marked in the history of making India a global superpower. Long-awaited, the new education policy was approved by the Union Cabinet at a meeting presided by Prime Minister Narendra Modi on Wednesday, 29th July 2020. The new education system aims at bringing in transformation reforms in the education system of schools and higher education. Replacing the 34-year old education system is another major move in the direction of strengthening India as a global power. During the tenure of former Prime Minister Rajiv Gandhi, in 1985, the Ministry of Education was assigned a new name as the Human Resource Development (HRD). And the National Education System (NEP) was formed in 1986.

However, at the same time, there must also be seamless integration and coordination across institutions and across all stages of education. The cardinal precept that will mentor both the individual and education institutions at large, are accepting, associating, and nurturing the distinctive potential of each student, by sensitizing teachers as well as parents to promote each student's holistic development in both academic and non-academic spheres. Pliability, 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.

## AMELIORATION IN STRUCTURE AND CURRICULUM OF SCHOOL EDUCATION

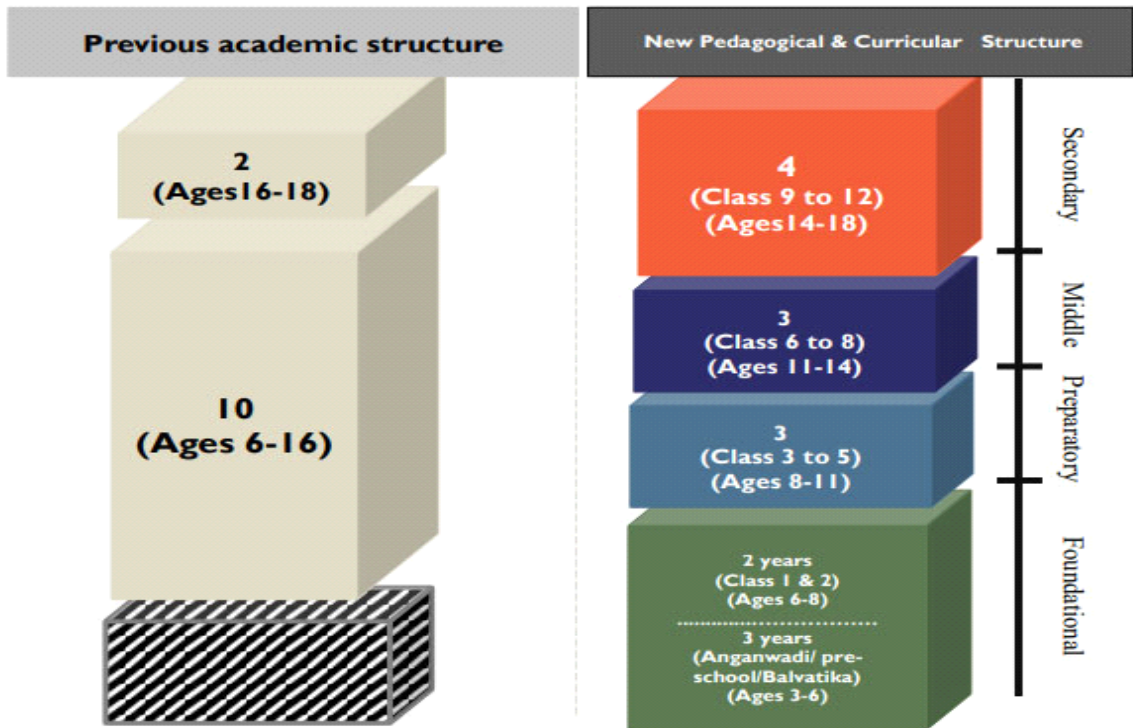
Among various other things, the NEP 2020 suggests a set of reforms to school education, with a focus on pliability of subjects and eliminating the gap between streams of learning. Another goal of the NEP is to achieve 100 percent Gross Enrolment Ratio in preschool to secondary level by 2030.

Firstly, the NEP changes the existing 10+2 structure of school education to a 5+3+3+4, covering children between the ages of 3-18.

This structure, when split up into corresponding grades, is- Three years of aanganwaadi or preschool + two years in primary school in grades 1-2 covering ages 3 to 8 years.

- The 'preparatory stage' covering ages 8 to 11 years or grades 3-5
- The 'middle stage' covering ages 11 to 14 years or grades 6-8
- The 'secondary stage' covering ages 14 to 18 years in two phases – grades 9-10 in the first and grades 11-12 in the second.

The New Education Policy 2020 focus to reduce the curriculum content to its core essentials, focussing on key concepts and ideas in order that children are able to practice more critical thinking and among other things, more analysis-based learning.



The new NEP also includes the renaming of the HRD Ministry back to the Education Ministry. Promoting the spirit of “Ek Bharat Shrestha Bharat”, Prime Minister Narendra Modi tweeted, “Aspects such as widening the availability of scholarships, strengthening infrastructure for Open and Distance Learning, Online Education and increasing the usage of technology have received great attention in the NEP. These are vital reforms for the education sector.”

In the Tweet thread, welcoming the NEP he said, “I wholeheartedly welcome the approval of the National Education Policy 2020! This was a long due and much-awaited reform in the education sector, which will transform millions of lives in the times to come.”

The new education system can prove to be a turning stone in the times to come. Some have welcomed it with open minds and for some, the changes introduced are still confusing. To make it easy to understand for the common man, here are some of the major highlights of the NEP.

## **HIGHLIGHTS OF THE NEW EDUCATION POLICY**

- ❖ All higher education institutes excluding the medical and law colleges will be governed by a single regulator.
- ❖ M.Phil. courses will now be terminated.
- ❖ Board exams will now be more application and knowledge-based.
- ❖ Both the public and private higher education institutes will be governed under the same norms.
- ❖ To promote and give more emphasis on the regional language/mother-tongue, instruction medium up to class 5 will be in local/home languages.
- ❖ All entrance exams for higher education institutes and universities will be held commonly.
- ❖ School curriculum to focus more on core concepts.
- ❖ Vocational education will also be imparted from 6th grade onwards.
- ❖ 10+2 study culture discontinue and new structure of 5+3+3+4 will be followed, subjecting to the respective age group of 3-8, 8-11, 11-14 and 14-18 years.

## **EVERYTHING ABOUT THE NEW EDUCATION POLICY IN INDIA IN DETAIL**

The major aim of introducing and implementing the NEP is to enhance the quality of education equally for all and moving in the direction of strengthening India as a global superpower.

The NEP was drafted by a panel led by the former head of Indian Space Research Organization (ISRO) Kasturirangan and presented to Union Minister for Human Resources Development Ramesh Portrayal when he took office in 2019.

1. **Single Regulations for all levels of school education-** NEP focuses on providing universal access to education at all level from pre-school to higher education. This will include:

- Infrastructure support.
- Introduction of vocational courses in the school curriculum.
- Introducing counsellors and trained social workers to schools
- Tracking the students and their learning levels.
- Bringing back the dropouts to the mainstream through innovative education centers.
- Facilitate multiple learning paths that involve formal and non-formal education modes.
- Grade 3, 5 and 8 will be provided open learning and open public schools through NIOS.
- Equivalent secondary education programs in grades 10 and 12

The above aims will be accomplished with the help of adult-literacy and life-enrichment programs.

2. **New Curriculum for Early Childhood Care and Education-** NEP will be replacing the 10+2 curriculum structure with a 5+3+3+4 structure. The new system has proposed 12 years of school education with 3 years of pre-schooling/ Anganwadi. 3-6 years of age is globally recognized as the crucial age for the mental development of the child.

Keeping this in mind the new curriculum structure has been formulated which will be corresponding to 3-8, 8-11, 11-14 and 14-18 years of age, respectively. The key points are:

- Anganwadi workers and kindergarten teachers will be trained in ECCE pedagogy and programs.
  - Ministries of Human Resource Development, Health and Family Welfare (HFW), Women and Child Development (WCD) and Tribal Affairs will collectively administer the ECCE.
  - National Framework for Early Childhood Care and Education (NCPFECCE) will be created by NCERT for children up to 8 years old.
  - Strengthened educational systems like Anganwadis and Kindergartens will focus on Early Childhood Care and Education (ECCE).
3. **Changes in School Curriculum and Pedagogy-** The School curriculum and pedagogy will be reformed, keeping in mind the overall development of students. The new curriculum will include equipping the students with
    - 21st Century key skills.
    - Co-curricular activities and vocational activities and academic streams will be regarded as the same.
    - Vocational education will include internships and will be imparted from class 6th onwards.
    - Enhance essential learning, practical and critical thinking and experiential thinking.

- Reduction in previous curriculum content.
  - More flexibility in choosing the subjects.
  - No distinguishing between science, commerce and maths.
4. **Pivot on Base Literacy-** According to the NEP, MHRD will set up a National Mission on Foundational Literacy and Numeracy. By 2025, States will prepare and implement a program to attain foundational literacy and numeracy for students till class 3 in all primary schools. Another step proposed in this direction is the formulation of a National Book Promotion Policy.
  5. **Promoting Regional/Local Language-** NEP proposes promotion of regional languages by making it the medium of instruction till 5th or 8th class. Sanskrit will be an optional third language subject at all levels of the school. Other than Sanskrit, other languages will also be available as optional subjects. Secondary level education will include teaching of other foreign languages as well. ISL (Indian Sign Language) will be made standard across the country and teaching material for students with hearing impairments will be developed for national and state schools.
  6. **Assessment Reforms-** The NEP proposes regular and formative assessments, replacing the summative assessment. The new assessment system is more competency-based. This will enhance the student's development and learning skills. The main aim is to increase the analytical, critical and conceptual thinking of the student. All students will take 3rd, 5th and 8th-year exams which will be taken by the competent authority. 10th and 12th classes will still appear for the board exams but the pattern will be restructured aiming at the integrated development of the child. A new National Assessment Center, PARAKH (Performance, Assessment, Review and Analysis of Knowledge for Holistic Development) will be established as a standard-setting body.
  7. **Changes in The Process of Teacher's Recruitment-** Teachers will now be recruited with more transparent processes and promotions will be merit-based. The Common National Professional Standards (NPST) will be created by NCTE by 2022, in deliberation with NCERT, teachers and expert organizations and SCERT at all levels and regions.
  8. **Standard Setting and Accreditation Program-** The new education policy, 2020 provides clear and distinct systems for university policy, regulation, operations and formulation. States/UTs will create an Independent Public School Standards Authority (SSSA). A new body called the School Quality Assessment and Accreditation Framework (SQAAF) will be created by SCERT for public accountability and oversight. This will promote transparent public self-disclosure.
  9. **Equitable and Inclusive Education-** The education policy will focus on promoting equality among all. Special attention will be given to the SEDG (Socially and Economically Disadvantaged) group. SEDG includes gender, geographical, cultural and social disabilities. This norm of the policy will work on
    - Gender Inclusion Fund

- Disadvantaged regions will have special education zones.
- Disabled students will be allowed for regular schooling with the help of teachers specialized for disable students.
- Training, accommodations, appropriate technology, etc will be provided to disabled students taking up regular schooling.
- States/districts are advised to set up day-boarding schools – “Bal Bhavans” for participation in extra activities that will be career and play related.

## **REFORMS INTRODUCED IN HIGHER EDUCATION SYSTEM**

The NEP naturally brings about a sea of changes in the system of higher education as well, aiming to improve it with the goal of “creation of greater opportunities for individual employment.” A goal of the NEP is also to increase the Gross Enrolment Ratio in higher education, including vocational education from 26.3 percent as of 2018 to 50 percent by 2035. One of the main aims of NEP is to rebuild the fragmented nature of India’s existing higher education system and instead bring together higher education institutions (HEIs) into large multidisciplinary universities, colleges, and HEI clusters/knowledge hubs. The policy states that, single-stream HEIs will be eliminated over time.

A change has also been made to the regulatory system, with the National Higher Education Regulatory Council (NHERC) set to serve as one single regulator for the higher education sector, including teacher education, but excluding medical and legal education.

1. **Overall Multidisciplinary Education-** The policy provides for a holistic, multidisciplinary and broad-based undergraduate education with flexible study plans, more options in choosing the subjects, including and focusing more on vocational education and more flexibility to enter and exit the course with authorized certification.
2. **Teacher Training-** NCTE will formulate a new comprehensive national educational framework for teacher training, NCFTE 2021, in consultation with NCERT. As per the policy of the new education system, by 2030, a teacher will require a minimum of B.Ed. degree of 4 years for teaching in any institution. Continued action will be taken against lower quality Autonomous Teacher Training Institutions (TEIs).
3. **50% Increase in GER-** The NEP aims at increasing the current GER (Gross Enrolment Ratio) from 26.3% to 50 by 2035. According to the NEP it is being speculated that 3.5 crore new seats will be added for higher education.
4. **Online education and digital education-** A comprehensive set of recommendations is provided in NEP, for the promotion of online education in the wake of the recent outbreak of pandemics to ensure the availability of quality alternative education modes anytime and anywhere. MHRD will create a special unit focusing only on the building of digital content and infrastructure to ensure the futuristic goal of e-education is met for higher education and schools.

5. **Vocational Education-** All types of occupational education and training will be a fundamental part of the higher education system, to strengthen the base of the students for different professions. An internship of 10 days in a year will also be provided to the students in local vocations according to the area or region. Autonomous technical universities, universities of health sciences, legal and agricultural universities, etc. they aim to become multidisciplinary institutions.
6. **Financial Education-** The NEP aims at increasing the current GDP to 6% higher at the earliest. And for this both the state and center government will work together and promote the increase of public investment in the education sector.
7. **Regulations-** The Higher Education Commission of India (HECI) will be established as a single and comprehensive coordinating body for all higher education, except for medical and legal education. HECI will have four independent verticals:
  - The National Council for the Regulation of Higher Education (NHERC) for regulation.
  - The General Council of Education (GEC) for standardization.
  - The Council for Higher Education Grants (HEGC) for funding.
8. **Open and Distance Learning-** Open and distance learning will have a vital role in increasing the GER. Measures will be taken such as online courses and digital repositories, research funding, improvement of student services, recognition of MOOCs on the basis of credits, etc. to ensure that it is keeping up with the standards of imparting the highest quality of classroom programs.
9. **Institutional Architecture-** Defining a university will allow for the creation of a variety of institutions ranging from research-intensive universities to education-intensive universities and independent degree-granting colleges. University membership should be phased out in 15 years and a progressive mechanism should be put in place to grant progressive autonomy to universities. Over time, each university is expected to become an independent degree-granting university or a college that constitutes a university.

## **REFORMS TO EXAMINATIONS & SPOTLIGHT ON MULTILINGUALISM IN SCHOOLS**

The policy also aims to promote multilingualism and a learning of native languages. According to the policy, board exams will be made 'easier', testing 'primarily core capacities/competencies' rather than rote learning. There will also be the possibility of taking the board exams twice in a year, once for the main exam and once for improvement, if a student so wishes.

## **REFORMING TRAINING OF TEACHERS**

The policy not only aims to transform education but also to improve the skills of those facilitating that education who are none other than teachers. In order to ensure that, the

policy seeks to institute a large number of merit-based scholarships across the country for studying quality four-year integrated B. Ed programmes. It also states that TET will be strengthened to inculcate better test material and the scores of the same will be taken into account for recruitment purposes.

### **BENEFITS OF NEW NATIONAL EDUCATION POLICY 2020**

- The New Education Policy will give prominence to students' pragmatic knowledge instead of just impelling them towards rote learning.
- It will support students to develop scientific character from a young age.
- The NEP aims to make it easier to set up brand new quality of higher educational institutes which will be on par with the global standards.
- Since NEP will make it easier for foreign colleges to set up their campuses here, many students who are unable to go abroad due to multiple reasons will be able to experience it and get global exposure.
- This will glorify and promote value-based education.

### **HOW TO SUCCESSFULLY IMPLEMENT THE NEP- 2020**

- Develop adaptability across HEIs, regulatory bodies and government agencies
- Develop credibility through transparent actions and participation of all stakeholders;
- Develop sound principles of management
- To implement NEP successfully at all levels the government will need to create stakeholder incentives so that the implementation is smooth and uniform.
- Formulate instruments in the form of legal, policy, regulatory and institutional mechanisms
- Build reliable information repositories

Schools will actually need to redefine the teaching and learning process for a proper implementation of NEP- 2020 to actually witness a trajectory of transformation for a phenomenal outcome.

- ❖ Emphasize on practical and experiential learning which will lead to instilling the 21st century skills of creativity and critical thinking in the children.
- ❖ There needs to be a tectonic shift in the pedagogical structure where the outcome of learning should not be based on the completion of course but on the understanding of the topic.
- ❖ The assessment as I said earlier needs a complete revamp. The assessment should not define a child in terms of marks but should be an outcome of a qualitative analysis of the child. As every child is different and the same question can be understood in numerous ways by the different children.



- ❖ There needs an integration of technology in education with component of digital literacy, scientific temper and computational thinking for a holistic learning experience of the students.
- ❖ Vocational or skill-based learning should also be included right from class VI.
- ❖ Teachers should be encouraged to be bilingual as study shows that children pick up different languages quickly in the early ages. Till Class V education can be imparted in mother tongue if feasible.
- ❖ There will be no hard discrimination between subjects and disciplines. Children will be encouraged to take multidisciplinary projects for better learning outcomes.

The NEP, which is designed to ease the burden of classroom teaching and examination on students, will play an important role in creating the future of the country. It's success, however, lies in uniform and transparent implementation at all levels, with an equitable distribution of resources. This mammoth task can be realized only when there is a 100% cooperation and collaboration between the Central, State Government and the Ministry of Education.

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# Physical and Health Education in the context of Social Values

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## ABSTRACT

*The purpose of this study is to investigate the impact of physical education and sports in promoting social values among youth. Physical education and sports plays a vital role in educating the youth regarding the importance of social values in their life. Reviewed literature investigated that the importance of association in educating both minds and body. Further, it also encourages the social values among youth that allow them to develop the socially.*

**Keywords:** Physical Education, Sports, Social Values, Youth, Academic Learning.

In present era, physical education and sports is an essential part of education. It contributes directly to development of physical competence and fitness. It also helps the youth to be aware of the worth of leading a physically active lifestyle. The healthy and physically active youth is more likely to be academically motivated, attentive, and promising. In other words, we can say that physical education and sports is exclusive to the school core curriculum. It is the only programme that provides the opportunities to youth to learn motor skills, progress mental and physical fitness. The benefits of physical gained from physical activity such as disease prevention, safety and injury avoidance, decreased morbidity and premature mortality, and increased mental health. The physical education is only the course where youth learn about all of the benefits gained from being physically active as well as the skills and knowledge to incorporate safe, satisfying physical activity into their lives, in addition, how to interact with others (National Association for Sport and Physical Education, 2001).

Moreover, it is observed that physical education sessions should be easy to get from preschool until secondary. It target to deal with a variety of physical activities and encourage those who are lack of leaning to take up planned competitive sports. This involves discard conventional methods of physical education teaching and focusing more on the individuals' needs and enjoyment of physical activity.

As time for physical education is generally limited within the school time schedule and curriculum, its content must be valuable and resourceful (Fox and Harris, 2003). Further Gonzalez et al. (2010) believed that curricular physical education within any sport, not only talent development scheme but a high development in social values among youth. Therefore, the purpose of this study is to investigate the role of physical education in promoting social values among youth.

## **PHYSICAL EDUCATION PROGRAMME CURRICULUM**

Physical education curriculum can offer youth with the appropriate knowledge, skills, behaviours, and confidence to be physically active for life. Moreover, physical education is the basis of a school's physical activity programme. In the same vein, participation in physical activity is correlated with academic advantages like improved concentration, memory, and classroom behaviour. According to World Health Organization (2001), it includes development of physical abilities and physical conditioning; motivating the students to continue sports and physical activity; and providing recreation activities.

## **DEVELOPMENT OF PHYSICAL ABILITIES AND PHYSICAL CONDITIONING**

Physical education facilitates to build up and practise physical fitness entails basic motor skills (Barton et al. 1999) and gets hold of the competency to perform various physical activities and exercises. Physical fitness builds mentally sharper, physically comfortable and also able to deal with the day-to-day demands (Jackson, 1985). Further, endurance, flexibility, strength and coordination are the key components of physical fitness. Moreover, to execute the physical exercises and sport, youth must be developed basic motor skills.

## **MOTIVATING THE STUDENTS TO CONTINUE SPORTS AND PHYSICAL ACTIVITY**

Teachers always motivate the youth to contribute in sports and physical activities as well as academic education programmes. Further, they always direct and instruct them, sports and physical activity are vital part of academic education. They have also guided the youth; we cannot think wholesome development of human personality without sports and physical education. Moreover, they have also to manage a meeting in which discusses their parents about the importance of sports and physical activity as well as academic education. Further, teachers must engage parent or family members in physical activity, for example, by giving youth physical activity 'homework' which could be performed together with the parent's& family walks after supper or playing in the park (WHO, 2001).

## **PROVIDING RECREATION ACTIVITIES**

Institutions must focus on implementation of physical activity course which facilitate to make enjoyable participation to all youth in physical activity programme which provides the youth with a collection of ideas for active games and activities and the skills and fitness to play them (Fox and Harris, 2003) in order to reduce the stress, anxiety, drug abuses and obesity.

## **PROMOTING THE SOCIAL VALUES AMONG YOUTH**

Physical education and sports play a vital role in promoting the social values among the youth. Moreover, physical education is considered as a school subject, which facilitate to prepare the youth for a healthy lifestyle and focuses on their overall physical and mental development, as well as imparting important social values among the youth such as fairness, self-discipline, solidarity, team spirit, tolerance and fair play (Bailey, 2005).

The present study focuses on physical education and sports helps to promote the social values among youth. Physical education and sports are considered as an essential part of education and culture. It build up the abilities, will-power, moral values and self-discipline of every human being as an entirely integrated member of society. The contribution of physical activity and the practice of sports must be certify that the throughout life by means of a global, lifelong and democratized education. It contributes to the preservation and enhancement of mental and physical health, gives a nourishing leisure-time activity and also helps to an individual to overcome the drawbacks of present stressful living. At the community level, they build up social qualities, social relations and also fair play, which is vital not only to sport itself but also to life in society. Education system must allocate the required position and applicable to physical education and sport in order to create a balance and strengthen between physical activities and other components of education. Physical education and sport course must be intended to suit the requisites and personal attributes of those follow them, as well as the institutional, cultural, socio-economic and climatic conditions of each country. In the process of education in general, physical education and sport programmes must, by virtue of their content and their timetables, help to create habits and behaviour patterns beneficial to full development of the human personality. Further, voluntary people, given appropriate training and supervision, can make an invaluable contribution to the inclusive expansion of sport and promote the participation of the inhabitants in the training and association of physical and sport activities. In addition, it also focuses on adequate and sufficient facilities and equipment which meet the needs of exhaustive and safe participation in both in-school and out-of-school programmes regarding physical education and sport. Physical education as a generic term is linked with socio-cultural, educational and social values, psycho-social qualities, socialization, inclusion, moral codes of behaviour, cognitive and physical development, well-being, healthy diet and other benefits to be derived from engagement in regular physical activity (Bailey, 2005). To conclude, education in general, and physical education in particular, should respond to the

needs of optimally developing individuals' capabilities and provide opportunities for personal fulfillment and social interactions, fundamental in human co-existence.

### LIMITATIONS AND FUTURE RESEARCH

The major limitations of this study are that lack of participation of students in physical activities. In future research, school management should organize the seminar and workshop in which aware the students about the importance of physical activity programmes. Further school management should also make compulsory the physical activity programmes. In future research should also include broader aspects of physical activity and assess the multidimensional nature of self-esteem. Further, this study is conceptual in nature; empirical study should be done in order to improve the generalisability of the findings.

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# Challenges Faced by Primary School teachers in Online Teaching During the Covid-19 Pandemic

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## ABSTRACT

*This research paper presents the various challenges faced by primary school teachers in online teaching during the Covid-19 pandemic and also presents how this Covid-19 pandemic has changed the teaching methodology of the teachers. The researcher has collected data from 27 teachers who are working in Government and Private Schools in South West Delhi. This sample is selected by the Purposive Sampling Method, criterion sampling appears to be used most commonly in the implementation of research. All respondents are conducting online classes for the first time in their career of teaching due to this Covid-19 pandemic. They are ready to learn new technology and methodology of the teaching. As a result, it was found that teachers used Zoom, Google meet, WhatsApp, and Google classroom for online teaching. While in online teaching respondents faced a number of challenges but among all - reaching the students in the remote area and teaching numerical subjects was the biggest challenge. Even after facing all the challenges number of respondents were satisfied with online teaching and ready to face many challenges to make learning feasible for the students.*

**Keywords:** Covid-19 Pandemic, Teacher, Challenges, Online teaching, Classroom teaching.

## INTRODUCTION

The COVID-19 epidemic has provided us with the opportunity to integrate digital learning. Learning is a life-long and continuous process in an individual's life. Learning plays a paramount role for teachers and students. The significance of learning is that- it helps the individual to acquire the necessary skills through learning and knowledge so that individual can achieve his or her desired goals in their life (Dhawan, 2020).

COVID-19 is an infectious disease that has impacted all walks of human life including education. The emergence of the COVID-19 pandemic has witnessed educational disruption on such a large scale (UNESCO-2020). This pandemic outbreak forced all educational institutions like schools, colleges, and universities to remain temporarily closed. The stakeholders in the education sector including heads of institutions administrators, teachers, parents, and students are taking important strides to ideally engage learners with the available technology for the continuance of teaching and learning (Ayere, Odera, and Agak, 2010).

Due to the pandemic, the whole world is shifted from Physical classroom learning to online classroom learning (Tsai, et. al. 2011). Both the teachers and students had to adjust to this new setting. These challenges include how to interact or communicate online, how to deliver plans and assess students, how to use available resources, knowledge of technology, access to the internet and provide feedback to students, also to provide real-time experience in a holistic manner (Patahuddin, et. al. 2018).

The covid-19 pandemic has brought many pros and cons along with it. This pandemic has totally changed the working system of the Indian education sector. Conducting online classes is a great challenge for teachers who are habitual of conducting classroom teaching for many years (Comité Ejecutivo Mundial de OMEP 2020).

## **STATEMENT OF THE PROBLEM**

Online teaching comprises a wide variety of programs that use the Internet within and beyond school walls to provide access to instructional materials as well as facilitate interaction among teachers and students. Singh and Thurman (2019), state that students in an online teaching-learning environment can be anywhere (independent) to learn and interact with instructors and other students. This study will try to investigate Challenges in online teaching faced by primary school teachers during the Covid-19 pandemic.

## **REVIEW OF THE RELATED LITERATURE**

Wirza, Y. & Rahayu, R.P. (2020), investigated three aspects: perceived usefulness, perceived ease of use, and their attitude. This study employed a descriptive design with a qualitative approach. They found out that teachers show a positive attitude toward the use of technology. However, this system is less effective in terms of interaction, motivation, and lack of facilities. Joshi, K. P., Jamadar, D, and Dixit, R. (2020), investigated the perception of faculty towards online teaching and learning during the lockdown. The study emphasized five major areas: overall perception of the faculty towards online teaching and learning, quality of face-to-face teaching v/s online teaching, incorporation of online teaching.

Wongjamnong, C., Muangou, C., and Nuangchalerm, P. (2021), explored that Students opinions towards online learning during the COVID-19 outbreak were not so good. They are ready to participate new normal classroom by using technology due to the nature of learning and learning environments emerging in their generation. Teachers need to reskill or upskill in field of educational technology within and post outbreak. While Haron, S. C.

et.al. (2021), addressed challenges faced by teachers in online teaching during the pandemic. Also, this study stated that the world is facing intrinsic challenges such as little or no knowledge, skills, and experience in the implementation of online teaching, as well as extrinsic challenges such as students having no internet access and coverage and own no proper gadgets.

Atiles, J. T. et. al. (2021), studied the components of Bronfenbrenner's (1995) PPCT model – process, person, context, and time are utilized as the framework for this study. Further, Umran, A. (2021), investigated the need of teachers during COVID-19 Pandemic. Different modes of learning, such as face-to-face, distance, and hybrid, have been used in the educational process. For this study, a purposeful sampling technique is used to know about the types of schools, gender, and years of experience.

### **Research Objectives:**

- To study various challenges faced by teacher's during the Covid-19 pandemic.
- To study how the Covid-19 pandemic has changed teachers teaching methodology.
- To study the level of satisfaction of teachers with online teaching methodology.
- To study what are the various methods of online teaching.

**Significance of the study:** As we know that during a pandemic, online teaching-learning became the only option. Actually, it provided life to education domain and give wings to learner's dream. In this study researcher study challenges in online teaching faced by primary school teachers.

**Delimitation of the study:** Keeping the pandemic situation in mind, the present study is delimited as under:

1. The study focuses only on the challenges in online teaching during a covid-19 pandemic.
2. The study is confined to only South Delhi Sarvodya Kanya Vidhyalya School and Covent of St. Garjiya School Teachers have participated in the research.
3. The scope of the present study was confined to a South West Delhi region only.

## **RESEARCH METHOD**

### **Sample and Sampling Method**

The total sample size of the study was ten teaching faculty members. The sample was collected from the South Delhi Government and Private Primary School. There were Ten Experienced Teachers, five male, and five females. They all have done masters in their studies. The primary school teachers were recruited using criterion sampling, which is the purposive sampling method. The main purpose of criterion sampling is to recruit a sample that satisfies a set of predetermined criteria (Yidirim and Simsek, 2011). Criteria sampling is a time and cost-efficient method by which researchers select in-service teachers most suited to the research purpose. The inclusion criteria for in-service teachers were: 1. Being voluntary



participants, and 2. Provided online education. The sample consists of ten teachers. The in-service teachers have more than ten years of teaching experience.

### **Research Design**

In this study, a quantitative research approach was followed (Fraenkel, Wallen, & Hyun, 2011). According to Fraenkel et al. (2011), quantitative methods are considered capable of providing reliable, valid, objective, and generalizable findings. Moreover, questionnaires, are one of the most widely used quantitative instruments. The self-made questionnaire was used, and it was peer-reviewed.

### **Research Tool**

In this study, a researcher prepared a questionnaire for primary school teachers and validated it by expert. All the participants were approached through What's App and personal email. The questionnaire was shared with the participants through a google form link. There were ten close-ended questions.

### **Procedure for Data Collection**

The data for the present study is collected through an online questionnaire. A significant reason for using an online questionnaire was compatibility with teachers' online work during the pandemic. Moreover, the online questionnaire was also easy to administer and accessible through various devices (Fraenkel et al., 2011).

### **Statistical Techniques Used**

The present study used Mean statistical techniques to analyze the data. In this technique, we add the values obtained from the data and divide it by the sample size. This technique is used to infer the overall online teaching experience of in-service primary government and private school teachers.

## **DATA ANALYSIS AND RESULTS**

### **Data Analysis and Interpretation**

The present study tried to assess new changes in the teaching of primary school teachers. The data is collected through a Google form link. It was shared with primary school teachers through What's App. In the present study, nine male teachers and eighteen female teachers participated. They all have done their higher education till their masters. All the teachers are having more than five years of teaching experience in the school.

Therefore, the researcher wants to know whether the respondents conducted online classes for their students due to covid-19 pandemic or not or either they were already teaching through online classes before pandemic. The twenty-five respondents (N=27) conducted online classes for their students. Only two disagree that they did not conduct online classes.

### Reasons for not conducting online classes

The researcher asked the reasons behind not conducting the online classes during covid-19 pandemic. The respondents were given their reason and data are presented below in the table 1.1.

Statement	No. of Respondents	%
No official notification from the school authority	3	15.8%
Insufficient facility of Information of Technology	3	15.8%
Not ready to accept sudden change	0	0%
Frequent breakdown of electricity and Network problems	10	52.6%
Indulge in personal work	2	10.5%
Had Covid	0	0%
Not applicable	10	52.6%

*Table 1.1*

### Platform used to conduct online classes

In the present study, to conduct online classes both teacher and students require some specific applications and software which should be installed on computer or mobile phone. There are different types of paid and free software available in the market. The teacher has to select appropriate software to meet the needs of online teaching. The researcher wants to know which software is used by respondents. The responses are presented below:

Statement	No. of Respondents	%
Google Meet	16	61.5%
What's App	4	15.4%
YouTube	4	15.4%
Zoom	7	26.9%
Google Classroom	7	26.9%
Skype	1	3.8%
Not applicable as not conducting online classes	0	0%
Others	0	0%

*Table 1.2*

### Methods used for conducting online classes

In the traditional classroom teaching scenario, teacher presented the content with the help of oral presentation, showing flashcards, poster, demonstration, solving numerical questions on black or whiteboard. The respondents which methods they used to conduct online classes. The data are as follow:

Statement	No. of Respondents	%
Google Slides	15	55.6%
YouTube Videos	8	29.6%
Whiteboards	7	25.9%
Video Conferencing	5	18.5%
Pre-recorded video	9	33.3%
Others	1	3.7%

Table 1.3

**Challenges faced by Teaches in Online Teaching during the Covid-19 Pandemic**

Conduct online classes is itself a main challenge for teachers who are habitual conducting classroom teaching for many years. Delhi is located in the north region of India. The data is collected from southwest Delhi Sarvodya Kanya Vidhaylya School and Covent of St Garjiya Primary School Teachers. Due to the pandemic, it was difficult to reach school. The researcher wants to study various challenges faced by the teaching faculty. The detailed analyses as follow:

**1. Difficult to reach students in remote areas**

A researcher wants to know whether it is difficult to reach students in remote areas while teaching online. The responses of respondents are following:

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
No. of Respondents	5	15	3	4	0	27
%	18.5%	55.6%	11.1%	14.8%	0	100

Table 1.4

**2. Difficult to motivate students**

A motivated person always gives the best on their performance. They stay always loyal and committed to their task or responsibilities. Without motivation it becomes difficult for the students to cope up with academics as they lost their interest and they are unable to perform better in the exam. The responses are presented below in table no. 1.5.

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
No. of Respondents	6	16	1	3	1	27
%	22.2%	59.3%	3.7%	11.1%	3.7%	100

Table 1.5

### 3. Challenges to keep tracking of student's progress

In online learning environment, it is important to help students to engage with course material which provides them ample opportunities of learning. Especially when students are learning remotely; the teacher must recognize the importance and problems of the students. Progress of students can be tracked through student's attendance, periodically exam, and mock interview. The researcher asked the respondents whether they faced challenges to keep tracking of student's progress and their responses are presents in table no. 1.6

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
No. of Respondents	2	11	3	4	2	27
%	7.4%	40.7%	11.1%	14.8%	7.4%	100

Table 1.6

### 4. Problem with electricity/Internet connectivity

Without strong access to electricity and internet connectivity, online classes cannot think. High internet connectivity, Wi-Fi, and broadband connections that facilitate high-speed internet is not installed as it is not required daily basis by people in a rural area, and some people can't afford it due to its high cost. Responses of the data are presented in below table no. 1.7.

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
No. of Respondents	9	14	1	2	1	27
%	33.3%	51.9%	3.7%	7.4%	3.7%	100

Table 1.7

**5. Lack of technical /Software knowledge**

Without proper knowledge of the software, they can't able to access online learning or record visual and audio. Software also required some specific requirement i.e. space of operating hard disk, updated windows, latest graphic on computer and many more. The responses of the respondents are presented below in table no. 1.8.

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
No. of Respondents	5	8	1	7	6	27
%	18.5%	29.6%	3.7%	25.9%	22.2%	100

*Table 1.8*

**6. Required more time in preparing course content**

Teaching online content are not the same as classroom teaching. The researcher wants to know does preparing course content in online teaching takes more time than preparation in classroom teaching. The responses of the respondents are presented below table no. 1.9.

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
No. of Respondents	10	12	2	3	0	27
%	37%	44.4%	7.4%	11.1%	0%	100

*Table 1.9*

**7. Lack of motivation in online learner**

Motivation influence interest and changes student behavior. Online learning requires more self-attention than classroom education. The researcher asked the respondents whether lack of motivation in online learners is a challenge faced by them in online teaching. The respondents' response and facts are presented in table no. 1.10

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
No. of Respondents	5	20	1	1	0	27
%	18.5%	74.1%	3.7%	3.7%	0%	100

*Table 1.10*

### 8. Difficult to teach numerical subject through online mode

Learners also can respond immediately to the teacher if there are any doubts about formula and equations. The respondents' responses to their view and data are presented in table no. 1.11.

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
No. of Respondents	8	16	1	2	0	27
%	29.6%	59.3%	3.7%	7.4%	0%	100

*Table 1.11*

### 9. Difficult to monitor discipline

The goal of teaching is to ensure that each student receives a quality education, and skills and develops talent. Therefore, keeping all this in view, the researcher asked the respondents whether monitoring discipline is a challenge faced by them during online teaching. The respondent's response and data are presented below in table no. 1.12.

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
No. of Respondents	5	20	0	2	0	27
%	18.5%	74.1%	0%	7.4%	0%	100

*Table 1.12*

### 10. Satisfy with online teaching

It is very important aspect to know whether teachers are satisfied with the new teaching system or methodology, and the availability of resources to teach. Hence, the researcher asked the respondents whether they are satisfied with online teaching or not. The respondents' response and data are presented below in table no. 1.13.

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
No. of Respondents	8	10	3	5	1	27
%	29.6%	37%	11.1%	18.5%	3.7%	100

*Table 1.13*

## **RESULTS AND FINDINGS**

Due to the Covid-19 pandemic, 95.59% of the respondents learned new online teaching methodologies and shifted from classroom teaching to online teaching. 52.6% of the respondents were not conducting online classes because they faced problems with electricity, network, lack of knowledge of information technology, and not being ready to adopt changes and have personal engagement. For teaching online - Zoom, Google meet, WhatsApp, and Google classroom was the major learning app used by 61.5% of the respondents. The majority of the respondents believed that anything that is in video form (i.e., pre-recorded video, animated video, video conferencing, YouTube video) is the best suitable method to teach students in online teaching methodology. 55.6% of the respondents found difficulties to teach students in remote areas. Poor infrastructures, not having the availability of strong internet access, no electricity, no computer, and inadequate knowledge of information technology are the main reason behind it. 74.1% of the respondents found difficult to motivate students in online teaching classes because of the minimum opportunity to interact face to face, difficult to know personal behaviour of the students, and understanding the problems of the students.

The majority 40.7% of the respondents found challenges to keep tracking of student progress in online teaching. 51.9% of the respondents found the problem of electricity and internet connectivity during a teaching in online classes. Sudden electricity cut down; no clarity voice due to low internet signal during online classes; discontinue class frequently affects not only learning but their interest as well. According to 29.6% of the respondents the lack of technical and software knowledge becomes one of the main challenges in conducting online classes. 44.4% of the respondents found online teaching methodology required no more time in preparing course content as they have to prepare their course content in the electronic form. 74.1% of the respondents found that lack of motivation in the online learner is one of the main challenges they faced by them in online teaching. 59.3% of the respondents found it difficult to teach the numerical subject in the online class. 74.1% of the respondents were agreed that monitoring discipline is challenges faced by them while taking online teaching classes. 29.6% of the respondents are satisfied with online teaching methodology. They enjoyed the flexibility of the time; they can now teach anywhere and can use or share wide internet resources.

## **CONCLUSION**

The Covid-19 epidemic has ushered in a new era in Indian education. Within three to four months of the lockout, the whole school system is ready to transition from classroom to online instruction. To encourage online learners, the learning environment should be attractively designed, and teachers should emphasize play-based learning rather than knowledge-based learning. Teachers are eager to master new technology and make the best possible use of all resources for successful teaching, even after encountering all of the problems that come with online teaching.

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# History as an Instrument for Curriculum Development

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## ABSTRACT

*This topic deals with past events, which have led to present trends in education. By analysing the past periods of curriculum, it is possible to view and review the needed curriculum in terms of current and future education needs. Exploring the historical foundations of the curriculum can promote a sense of freedom and encourage educational reform. This paper takes a look at the role of history in curriculum development from a historical perspective. It identifies that history is an instrument used in unfolding aspects of our cultural heritage that are no longer worthy, of their irrelevance to the present society among others. Suggestions are made on the need to emphasize a proper understanding of history in our advances in curriculum development.*

**Keywords:** Education, History, Curriculum, Curriculum Development.

## INTRODUCTION

The term curriculum refers to the lessons and academic content taught in a school or a specific course or program. In dictionaries, the curriculum is often defined as the courses offered by a school, but it is rarely used in such a general sense in schools. Depending on how broadly educators define or employ the term, curriculum typically refers to the knowledge and skills students are expected to learn, which includes the learning standards or learning objectives they are expected to meet; the units and lessons that teachers teach; the assignments and projects given to students; the books, materials, videos,

presentations, and readings used in a course; and the tests, assessments, and other methods used to evaluate student learning. An individual teacher's curriculum, for example, would be the specific learning standards, lessons, assignments, and materials used to organize and teach a particular course.

A curriculum is a standards-based sequence of planned experiences where students practice and achieve proficiency in content and applied learning skills. The curriculum is the central guide for all educators as to what is essential for teaching and learning so that every student has access to rigorous academic experiences. The structure, organization, and considerations in a curriculum are created to enhance student learning and facilitate instruction. The curriculum must include the necessary goals, methods, materials and assessments to effectively support instruction and learning.

It is important to note that while curriculum encompasses a wide variety of potential educational and instructional practices, educators often have a very precise, technical meaning in mind when they use the term. Most teachers spend a lot of time thinking about, studying, discussing, and analysing curriculum, and many educators have acquired a specialist's expertise in curriculum development i.e. they know how to structure, organize, and deliver lessons in ways that facilitate or accelerate student learning. To non-educators, some curriculum materials may seem simple, but they may reflect a deep and sophisticated understanding of an academic discipline and of the most effective strategies for learning acquisition and classroom management.

This paper is interested in discussing history as an instrument of curriculum development, but not history as a discipline in itself. In its bid to achieve the stated objective, the paper will answer the following questions:

1. What is curriculum development?
2. What is history? Also, examine the relationship between history and curriculum development.

## **WHAT IS CURRICULUM DEVELOPMENT?**

Curriculum refers to specific lessons and academic contents taught in schools and educational institutes for a particular course or program. On the other hand, curriculum development is a process that aims to improve the curriculum by using various approaches. A few of the commonly used techniques include need and task analysis, objective design, choosing appropriate teaching and learning methods, choosing assessment methods, and forming the curriculum committee and curriculum review committee. Hence the entire process is divided into segments to ensure the development of an effective curriculum that would help to facilitate an enriching educational programme.

Curriculum development is the multi-step process of creating and improving a course taught at a school or university. While the exact process will vary from institution to institution, the broad framework includes stages of analysis, building, implementation, and evaluation. The curriculum is often developed at a local or state level to result in standardized

learning outcomes across different schools. At the college level, instructors may get more individual flexibility to develop their curricula. Either way, the individual or group is responsible for planning a course (and choosing strong corresponding course materials) that effectively accomplishes educational goals and meets student needs.

Ideally, the curriculum development process should be one of continuous improvement rather than a linear or stagnant approach. Plans for instruction should be frequently reviewed, revised, and updated as new and different needs arise. Change may be required due to subject-area discoveries, innovations in instructional best practices, or shifts in course delivery.

Curriculum development has a broad scope because it is not only about the school, the learners and the teachers. It is also about the development of a society in general. In today's knowledge economy, curriculum development plays a vital role in improving the economy of a country. It also provides answers or solutions to the world's pressing conditions and problems, such as environment, politics, socio-economics, and other issues on poverty, climate change and sustainable development.

There must be a chain of the developmental process to develop a society. First, the school curriculum particularly in higher education must be developed to preserve the country's national identity and ensure its economic growth and stability. Thus, the leaders of a country must have a clear vision for their people and the country as well. The country's economy can improve the people's way of life through curriculum development. And to develop it, curriculum experts or specialists should work hand in hand with the lawmakers, the local government officials and the business communities and stakeholders by implementing rules and policies for educational reforms.

## **WHAT IS HISTORY?**

History is the study of the past specifically the people, societies, events and problems of the past as well as our attempts to understand them. History is the study of change over time, and it covers all aspects of human society. Political, social, economic, scientific, technological, medical, cultural, intellectual, religious and military developments are all part of history. It is generally said that "history repeats itself". History cannot repeat itself because history is not a living, thinking being. History is an intellectual discipline practised by historians who try to make sense of the past. Because history is about change, nothing was ever "always" a certain way.

People often romanticize the past and speak of the "good old days" when they believe that things were generally better than at present. Conversely, some see history exclusively as a story of progress with everything constantly improving. People of all eras have made great achievements and committed terrible blunders; so processes of historical change cannot be categorized as either simple progress or regression. Historical processes involve complex relations between interrelated factors.

## **WHY IS IT IMPORTANT TO STUDY HISTORY?**

History is one of the most important academic pursuits of any child's education. Here, we outline the importance of learning history and reveal study tips for pupils. We all live in the present and we plan for the future. But how do we understand where we're going and what progress looks like? To know exactly where you're going, you first need to understand where you have come from. For that, you need an appreciation of history. Through history, we can learn how past societies, systems, ideologies, governments, cultures and technologies were built, how they operated, and how they have changed. The rich history of the world helps us to paint a detailed picture of where we stand today. Without a thorough understanding of history, efforts at reforming education in any nation may rather be dull and without direction.

## **RELATIONSHIP BETWEEN HISTORY AND CURRICULUM DEVELOPMENT**

Knowledge of the curriculum history enables the curriculum developers to be abreast with the trend, and identify the shortcomings, failures and successes of curriculum development efforts in the past, in their bid at an intelligent reconstruction of the curriculum field in the present. Education is the transmission of the cultural heritage of a people. The objective of education in any country is derived from the culture of that society education is to serve. Those cultural aspects to be taught, and learned by learners in schools, are enunciated in the objectives of education and reflected in the philosophy of life of the nation.

A reflection on the philosophy of life of a nation demands that the life of the nation in the past should be considered before the new curriculum emerges. Since history enriches humanity in its bid at unfolding the ethical values of society in the past, as earlier noted, it is necessary to consider the relationship between history and curriculum development. The history of philosophy is generally relevant to human affairs for the same reason that the history of anything is relevant. Knowing where we came from helps us understand where we are and gives us some idea of where we might be going.

History offers us an idea of the ideals and values of our society in the past as we relate them to the present to build a future brighter society. Acting in its function as a road map into the ideals and values of our society, history automatically blends with curriculum development in the effort of transmitting the desirable content of the culture derived from the national philosophy of education.

Curriculum development is intricately related to history in the sense that any consideration of its relevance borders on its sensitivity to the values, beliefs, norms, tradition, aesthetics, science and technology, art, religion, and customs of the people. The curriculum's sensitivity to the totality of the ways of life of a people signifies that no curriculum can be considered relevant to the development of a people unless it is deeply rooted in their cultural milieu. Be that as it may, one may infer that curriculum, which is the transmission of the cultural heritage, derives its inspiration from history.

Education which aims at perpetuating the culture of the society from which it emanates mandates a thorough knowledge of its rooting. Against this backdrop, history comes in closely with curriculum development. Both history and curriculum development meets at this point since the perpetuation of the culture of a people from generation to generation is an integral part of what is imbibed by the learner, through the curriculum. Those cultural aspects that are considered unworthy of preservation and to be discarded for their failure to rhyme with the needs of the contemporary society, through curriculum development are only understood through the knowledge of their history. Therefore, the important relationship between history and curriculum development is that of connecting what has gone in the curriculum past to the reconstruction of the curriculum present.

Because most recent curriculum reforms are focused on pervading social problems that have their genesis in past curricula. One can suppose that efforts at improving the quality of education, as well as attaining the goals of education in any particular country are not new. They have benefited from the lessons that might have been learnt from the perspective of historical experience. The points made so far in the preceding paragraphs do not, however, suggest that contemporary problems in the curriculum field can only be solved by simply turning to the past. The argument here is that history as it relates to the curriculum has proper recognition in curriculum development.

### **HISTORY PLAYS THE ROLE OF CONNECTING THE CURRICULA PAST TO THE PRESENT AS OUR SOCIETY CHANGES IN TIME**

Continuity is a feature that plays a dominant role in the reconstruction of knowledge in history. Because of the dynamic nature of life, to understand the essence of our contemporary curriculum, we must surely have a sense of its historical evolution. This is because history has shown, that everything was connected to everything else, believing that the nature of everything is entirely understood in its development. The narration of our curriculum history will go a long way in enabling us to understand and improve our efforts at curriculum development in the contemporary scene. The modern curriculum should be a reflection of the past, the present and the future so that knowledge of the past can help us operate the present better and give shape to the future. The contemporary society will find value in history as a roadmap for the present and continue to consult it with greater regularity for educational guidance.

### **HISTORY IS RELEVANT IN IMPLEMENTING THE DEVELOPED CURRICULUM**

History enables us to use the lessons of the past to make predictions for present actions or future developments. It is, therefore, evident that history helps in the reconstruction of parts of the curriculum past, which have relevance for the learners who undertake it, and contemporary significance for the entire society. Knowledge of the inadequacies in the content area of our curricula will enable us to fashion out new learning experiences that will rhyme with the needs and aspirations of contemporary learners in particular. By truly

understanding periods of change in the past as they were understood by contemporaries, we can make legitimate and fruitful contrast with change in our time.

## **HISTORY PLAYS THE ROLE OF ASSESSING AND ANALYSING THE WORTHWHILENESS OF THE CURRICULUM**

No curriculum can be considered relevant to the development of a people unless it is deeply rooted in their cultural milieu. Any consideration of curriculum relevance borders on its sensitivity to the values, beliefs, norms, tradition, aesthetics, science and technology, art, religion and customs of the people. The knowledge of history will surely inspire curriculum developers to take account of changes in the social order in their curriculum development effort. The knowledge of history will enable us to determine the worth or relevance of the curriculum developed for a people. It is, therefore, very important in the curriculum evaluation process. History enables us to apply its exercise of thought in assessing evidence, to critically examine, in an objective manner, the extent to which the desired change has taken place in the new curriculum. The purpose of studying history as a discipline is that of enlarging students' capacity to deal with problems by the exercise of thought in assessing and reaching conclusions. History as a discipline is an instrument which can be employed in the intelligent and critical evaluation of any given developed curriculum, be it at the stage of revision, or implementation, through evidence and objective analysis of the existing or past curricula.

## **SUGGESTIONS**

It is suggested that:

- ❖ Curriculum developers and practitioners should be abreast with the past and origin of the curriculum and be current on developments in the curriculum field at present.
- ❖ The use of persons or groups vast in curriculum theories affecting different areas of knowledge should be emphasized for the effective development of curricula in the different fields of study.
- ❖ History should be made compulsory at the senior secondary level, because its study may contribute to widening our horizons in respect of the fundamental questions that may arise when curricular issues are to be considered in our future educational development endeavours. Without a proper understanding of history, advances in curriculum development may rather be dull.

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# Depression Detection from Social Media

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## ABSTRACT

*Depression is a common mental health problem in a society and it can cause a loss of interest in general activities that can lead to suicidal thoughts. It has an effect on the language usage reflected in the written text. Now a days, social media have become the most common platform for anyone to express their emotions and feelings. Now a days, Social networking sites allow users to communicate their views, ideas, and thoughts. So the growing usage of social media has also been related with mental illnesses such as suicidality and depression. The research in the Natural Language Processing (NLP) field has allowed researchers to recognize person's texts as they shared in their social media account. This paper discuss the methods and approaches used in detecting depression from social media texts and mainly emphasis on the choice of word usage by the social media users. It means words usage are a possible indicator in detecting depression from social media texts.*

**Keywords:** Social Media; Depression Detection; Natural language processing; Text Analysis.

## INTRODUCTION

Depression has increasingly been acknowledged as a common mental illness often associated with today's digital lifestyle <sup>[1]</sup>. According to the World Health Organization (WHO), there are as many as 280 million people of all ages globally affected by this illness. Depression may become a serious health condition and the affected person to suffer greatly and perform poorly at work, at school and in the family. At its worst, depression can lead to suicide. Over 700 000 people die due to this illness every year. So, suicide is the main cause of death in 14 to 29-year-olds.<sup>[2]</sup>

After studying the choice of words used by anyone on social media, it is easy to recognize their emotion and any psychological problem at the time of writing. There are numerous

research working on automatic detection of depression from social media based on the texts share by the individuals.<sup>[3]</sup>

This paper describes to understand the effectiveness of detecting depression using writing styles and word usage. For this Natural Language Processing (NLP) and text analysis methods provide more effective results in comparison to previous researches.

With the studies about depression from social media and Internet age have brought new challenges. Social media such as Facebook, Twitter or Reddit provide a new platform for innovative research with a rich source of text data and social metadata to capture the users' behaviours. To evaluate the textual data, NLP techniques and various classifying approaches are playing a vital role for this research.

If depression not treated then it can lead to several effects that does not only affect the individual but also the society. Severe intensity of depression decreases the efficiency of an individual and could also lead to suicide.<sup>[3]</sup> Various cases of depression have been reported which includes individuals from different set of demographics such as adolescents (Adhikari S., Chettri T., and George S., 2019), people from certain ethnicity or gender, and the elderly.

Depression consist of several cognitive, physiological, and affective signs of depressive disorders defined in the most recent edition of the Diagnostic and Statistical Manual for Mental Disorders (DSM-5).

DSM-5 describes nine possible signs of depression such as (1) depressed mood, (2) lack of interest, (3) significant changes in weight, (4) restlessness (5) anxiety (6) loss of energy, (7) feelings of worthlessness and guilt, (8) diminished ability to concentrate (9) recurrent thoughts of death or suicide.

## **RELATED WORK**

(Brown G. P., Craske M. G., Hammen C. L., and Wickens T. D., 1995) study found that students who were having negative thoughts about their future believe that they may not pass the class. This then makes them believe that they are not enjoying the class and finally, they will have negative thoughts about themselves as they think that they do not deserve to be in college in the first place.

Another study by (Moilanen D. L., 1995) on adolescent depression found that the students' depression was often associated with dysfunctional beliefs and negative future attitudes.

(Chung C. and Pennebaker J. W., 2007) studies the field of social psychology and understand the relations between the language and words used by individuals and its reflection towards the individual's behaviour and personality.

(Moreno M. A., 2011) evaluated the status updates of 200 Facebook users by using the references to "self-declared" diagnoses identified through "I feel hopeless" statements.

(Choudhury M. De, Counts S., Gamon M., and Horvitz E., 2013) found one method of early detection of depression from tweets by individuals in their work by using text mining.

(Choudhury M. D., Coppersmith G., Dredze M., Kiciman E., and Kumar M., 2016) analysed the posts of Reddit users who wrote about mental health discourse and later shifted to discuss topics about suicidal ideation.

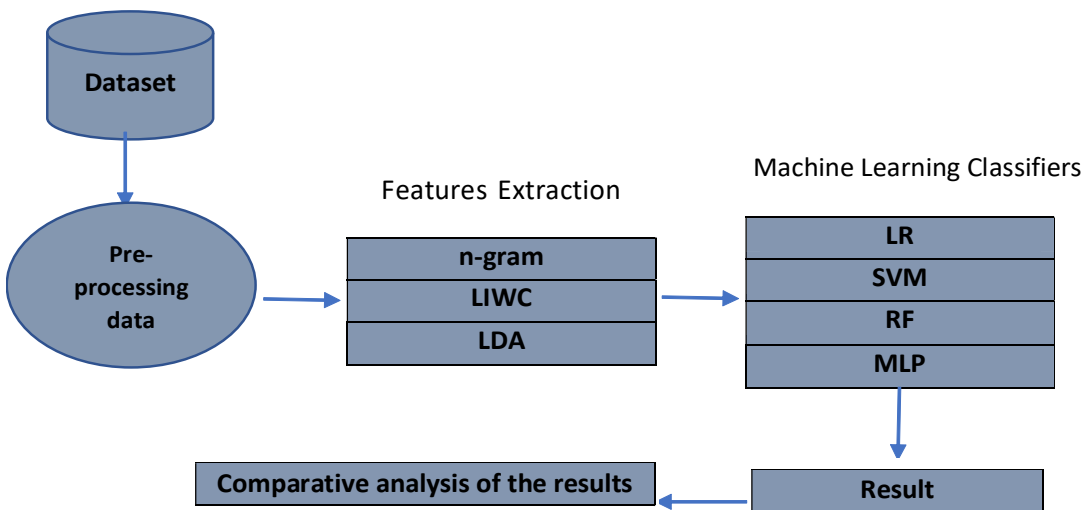
(Bagroy S., Choudhury M. De, and Kumaraguru P., 2017) examined the potential of social media for studying the mental health of college students from over 100 universities. Based on the results, the amount of the posts connected with depression increased over the course of the academic year, especially at the universities with quarter-based schedules.

### TECHNIQUES TO DETECT DEPRESSION

There are various number of techniques to detect depression from the social media posts. Here, we provide a technical description of approaches applied for detecting depression using the NLP and text classifying techniques.

**Table1. Words frequently used in depression - indicative posts and standard posts <sup>[3]</sup>**

Depression - Indicative Posts	Standard Posts
alone, break, blame, depressed, deserve better , deserve unhappy, die, escape, distraction, nobody, feel alone, feel depressed, felt pain, fuck don't , hate, hurt, loneliness, mine, myself, reject love, safe, shit, sucks, no job, painful, pressure , too worried, unsuccessful, ugly, uncomfortable, winter, worry, worth, wrong life	awesome, aunts, believe, beautiful, close, advice, cooking, cousins, don't care, encourage, family, logical person, got married, I do, better, mom, peace, parents, spend time, new friends, right, funny, need, thankfully, uncles, soul - friends, work, weekend, movie, potential, texted me, too good



**Figure1. Depression Detection Framework [3]**

In the above depression detection framework, there are various machine learning classifiers such as Logistic Regression, Support Vector Machine, Random Forest, and Multilayer Perceptron classifier.

1. **Logistic Regression (LR)** is a linear classification approach used to predict the probability of a categorical dependent variable using a given set of independent variables.
2. **Support Vector Machine (SVM)** is a supervised machine learning technique. It is used to create the best decision boundary that can distinctly classify the data points of n-dimensional space. We can easily place the new data point in the correct category in the future. This best decision boundary is called a hyperplane
3. **Random Forest (RF)** contains number of decision trees and based on the concept of ensemble learning which aggregate results from multiple predictors. It uses bagging technique that allows each tree trained on a random sampling of original dataset and to improve the performance of the model.
4. **Multilayer Perceptron (MLP)** is an artificial neural network. It is formed from multiple layers of the perceptron and connects multiple layers in a directed graph that means that the signal path through the nodes only goes one direction. Each node, apart from the input nodes, has a nonlinear activation function. MLP uses backpropagation as a supervised learning technique.

## CONCLUSION AND FUTURE WORK

This paper tried to explain some techniques that are used for recognize the presence of depression in person's texts as they shared in their social media account. Also described a closer connection between depression and words usage by applying NLP and text classification techniques. In future work, it may describe how to use the above defined techniques for identifying the users' personality and their depression-related behaviour reflected in social media.

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