

# Uday Memorial B. Ed. College

Kedal, Neori Vikas, Ranchi, Jharkhand 835217  
Recognized by ERC, NCTE, Bhubaneswar, Odisha, Approved under section 2(f) of UGC Act, 1956  
Affiliated to Ranchi University, Ranchi  
&  
Jharkhand Academic Council (JAC), Ranchi, Jharkhand



# UDAYAN

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**A Two Day International Seminar On**  
**“Digital Technology in Education for Sustainable**  
**Development”**

**Date- 27<sup>th</sup> and 28<sup>th</sup> April 2024**



**Organised by**

**IQAC, Uday Memorial B. Ed. College,**  
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We are glad to inform that Uday Memorial B. Ed. College is going to introduce a composite unit of D. El. Ed. (Diploma in Elementary Education) in the session 2017-2019. We are thankful for the support of each & every individual. The college is co-educational and the course D. El. Ed. is of 2 years and having 100 seats (Two Units) in each academic year. Uday Memorial B. Ed. College was established on 2012. It is affiliated to Ranchi University, Ranchi and recognised by National Council for Teacher Education (NCTE) also Approved under section 2(f) of UGC Act, 195 for B. Ed. Course and Under Jharkhand Academic Council, Ranchi and recognised by National Council for Teacher Education (NCTE) for D. El. Ed. Course. The college is run and managed by Uday Memorial Charitable & Welfare Trust founded in the year 2008.

The College is co-educational and at present capacity of 100 students for each academic year in D. El. Ed. Course and 100 students for each academic year in B. Ed. Course. Uday Memorial B. Ed. College which began as a smart building today possess an efficient infrastructure which and well lit Classrooms, Separate Girls and Boys Common Room, Art and Craft Resource Centre, Music Resource Centre, Health and Physical Resource Centre, Science and Mathematics Resource Centre, ICT Resource Centre, Psychology Resource Centre, Language Lab., Library, Seminar Room, Multipurpose Hall and Spacious Ground.

The College has a well-stocked library possessing a rich collection of books and journals that cover the D. El. Ed. & B. Ed. syllabus as well as reference book in various subjects.

At Uday Memorial B. Ed. College the environment is holistic, the relation of faculties and student teachers are friendly and very supportive. We consider parents as important stakeholders in our attempt to provide quality and varied skill building techniques among students so that they learn to be happy and caring individual as well as committed citizens of India and the World at large.

At Uday Memorial B. Ed. College student teachers play a very important role in a student's life. It's a teacher who guides a student through his or her career. So it is very significant to be adequately equipped with resources that will teach a person about teaching and the different aspects associated with it.

The National Council for Teacher Education (NCTE) of Education Research and Training has been given different types of work covering approximately all aspect of teaching education and quality improvement in teaching education.

The National Policy on Education (1986) (1992) and it revised version (2014) say that the teachers reflect the socio-culture philosophy of a society situated in the vicinity of Ranchi University, Ranchi.

## UDAYAN

The word 'UDAYAN' is derived from Uday. Which means to blossom i.e. to rise upwards, to move forward, to move forward, to rise. When a seed is sown, the seed grows from a small plant to a huge tree. A huge tree provides coolness to the entire world and in that coolness all living beings become filled with joy.

Similarly, in the year 2008, Honorable Shri Santosh Mahto jee also imagined a huge tree. He put forward the idea of opening a teacher training college to his respected father Shri Harakhnath Mahto jee, to which he agreed after consulting all the family members. After that, Shri Santosh Mahto jee along with all the dignitaries and intellectuals of the nearby area organized a general meeting. In this general meeting, the evils, superstitions and illiteracy prevalent in the village were highlighted. Subsequently, it was concluded by all the dignitaries and intellectuals that illiteracy is the root of all evils, hence a teacher training college should be opened. Out of which, skilled and talented teachers, after getting education, can spread light all around with their efficiency and education in the country and abroad and at the same time can make an important contribution in eradicating the evils, superstitions and illiteracy prevalent in the society. For this, a proposal was made by all the dignitaries and intellectuals to form a trust. Paying homage to Late Uday Nath Mahato, all the dignitaries and intellectuals passed the proposal to name the Trust as "**Uday Memorial Charitable and Welfare Trust**" after him. After the formation of Uday Memorial Charitable and Welfare Trust, the foundation of Uday Memorial B. Ed College was laid in 2009 with the help of the Trust. Which has now taken the form of a huge tree. At the same time, like the rays of the rising sun, it is piercing the darkness of the night and spreading golden colors in ten directions with its brilliance. The trainee teachers imbibed the rays emanating from Uday Memorial B. Ed College. The work is being done to educate the future generations and add color to them. Due to which the college can be considered a meaningful step towards ending the evils, superstitions and illiteracy prevalent in the society.

When the sun rises towards the sky from the horizon wearing a vermilion form, then when its redness emanates from the flowing winds, into the playful rivers, into the still ocean, into the swirling clouds, into all the things of nature, into the stars and planets, into all the living and non-living things, then no one can remain without getting influenced by it. Similarly, no one can remain without being impressed by the trainee teachers taking training from Uday Memorial B. Ed College, Kedal. Because the trainee teachers taking training from Uday Memorial B. Ed College, Kedal are leaving their indelible mark in their respective fields all over India.

The rising sun gives a message to every human being that we all the people of the universe are bound by the rules of nature and society and due to which everyone has to do their work systematically. Every human being has his own goal and the goal is fulfilled only by the one who is steadfast like the sun and gives light to others. All the planets and constellations are sources of inspiration. There is no rest for them, they have to keep doing their work as long as this universe exists.

Karma is worship, worship is power

Power is truth, truth is religion.

The people who complete their work with this feeling of devotion, it is from there that 'UDAYAN' takes place.

## Introduction

In the Brahmabela of sunrise, a unique child was born on Friday, 26 February 1885, in a farmer family of village Kedal, with the bells of the temple and the prayers of the mosque. His mother's name was Shrimati Dukhni Devi and father's name was Shri Jagat Mahto. His grandfather Shri Parasnath Mahto and grandmother Shrimati Dharmi Devi were very happy to see the face of their grandson. While naming his grandson, his grandfather asked what name he should name him, he has come up with his own name. That's why I name this child '**Uday Nath Mahto**'. From that very day, the entire family members started calling this little boy by the name of Uday. Father's first child was full of serious nature and calm nature. Later this child became the pride of the entire family. Grandfather was very affectionate towards his grandson. Apart from his family, he also got immense love from his maternal grandparents.

At that time very few people were able to study. His grandfather always used to say that looking at the glow on Uday's face, it seemed that 'Uday' would one day do such work on which the whole family would be proud and this was also proved when an Amin came and stayed in his house to conduct the survey of 1902. At that time, apart from seeing Khatiani documents from Amin, he also acquired bookish knowledge. Amin jee stayed in his house for three years, during which he got to learn a lot from him. It has also been said that a promising person has a smooth life. This saying was proved on him because he did not have any degree, yet there was no high thinking and educated person like him.

Hearing his praise, the British came to his house and honored him as a teacher and employed him in Dumargarh Hapsi Camp School. At that time his honorarium was Rs 15 per month. But due to his open minded nature, loving nature and independent nature, he could not restrain himself for long and left school after going to school for 2 years. When he did not go to school for several days, a British soldier came to his house and asked him, Guruji, why did you suddenly stop going to school. Then he said, I cannot disobey my mother's orders. Because my mother wishes that I should not do a government job and serve my village.

Then he said, "I love nature, nature is our mother."

Being free from rules and restrictions, having an amazing, talented and kind nature who loved nature, he was deeply filled with love. Couldn't stop the inner restlessness. Because at that time there was no hospital or medical even far away from the village, then I was carrying this unbearable pain in my chest. After leaving school, he took himself on a different path. Medicinal work was in his veins, there was just a need to bring it out, hence he had the desire to do something towards the society and started searching for different types of herbs from the forests and making medicines for animals and humans. Initially, he used to give medicines only in his nearby villages, but when the medicine made by him started benefiting both animals and humans and they started getting cured, his medical work spread to far-off villages. His treatment was reliable. He did not take anything in return for treatment, due to which people of every class started getting treatment from him, he became quite popular and famous. He memorized the teachings of Geeta, the story of Mahabharata and the verses of Ramayana by heart. He had immense love for nature.

He was firm on his religion. When he became old and could not go to distant villages to give medicines, his elder son respected his work and taking the work forward, he started giving medicines. The way father used to give free medicines. Similarly, his sons also started giving medicines in more villages than him. He left his body in 1975 at the age of 78. In his last journey, apart from his own village, people from all the nearby villages bid him farewell with tearful eyes. Today he is no longer among us, but even today people are adopting the medicines made by him and are getting healthy.

One who has never been burnt,  
knows the pain of burning.  
There is no special medicine for burns.  
Just Karanji oil.  
Sunlight in hot oil,  
water falling in sunlight.  
Then this medicine is made,  
which removes the burning sensation.  
When the earth was hot in the month of Jyeshtha,  
drops of water fell on the earth,  
when a fragrant fragrance came out from the earth,  
then that soil was brought and kept in a pitcher,  
it would come in handy,  
at that time,  
when there were wounds in Ashadh,  
that soil was made into a paste  
and put on the wound,  
then the wound would be completely erased.  
All traces disappear.

Due to following the path of truth and performing their duty sincerely, today his entire family, like him, is inspiring the society towards a direction in the discharge of their duty, which is like showing a mirror to the society. In fact, there are very few such people. Which are inspiring those who sincerely seek the welfare of the society by adopting the path of truth.

## ORGANIZING BODY

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**Dr. Binod Narayan**  
Registrar, Ranchi University,  
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- Guest of Honour** : **Prof.(Dr.) Mita Banerjee**  
Former V.C.,WBUTTEPA,  
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- Guest** : **Prof.(Dr.) Biju Kumar  
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## **Statement of the international seminar**

Mutual exchange of innovative thoughts and activities always gives qualitative outcome in any system or process. Digital technology in education for sustainable development. We must have a strong faith on collaboration and cooperative pedagogy. This approach is rooted in the belief that there are many legitimate ways learn and to support learning. Growing children differ in their social and economic characteristics. By understanding the range of education options, communities and families can deliberately choose modes of learning that address their most important needs.

Utilization of learning community approach improves the quality of teaching-learning and utilizes strategies such as contextualized innovation, quality assurance and accreditation mechanisms authentic and real world learning, project based learning, collaborative learning, digital technology and ubiquitous leaning, game-based learning and many other methods thus influencing the concerns of global education reform such as governance, finance, teacher and curriculum. This seminar aim to create a synergy of experts from various fields of world academia who will together explore the feasibility of nurturing community approach for digital technology education reform.

**Dr. Ajit Kumar Sinha**  
**Vice-Chancellor**

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### **MESSAGE**

It is a matter of great pleasure that the Uday Memorial B. Ed. College, Kedal, Ranchi, is going to organize a two-day an International Seminar on the theme “Digital Technology in Education for Sustainable Development” on 27<sup>th</sup> & 28<sup>th</sup> April, 2024 and it is bringing out a souvenir to commemorate the occasion.

This International Seminar will give a perfect opportunity for intellectuals to come together and discuss the effect of digital technology in education for sustainable development. Increased access to education resources students can access a vast range of information and resources that unavailable in traditional classroom.

Increased student engagement Digital technology has made education more interactive and engaging. Digital technology in education has significant altered the methods of teaching and learning, presenting a multitude of benefits that possess the capacity to work as a strong supplement for the numerous domain.

Wishing you all the very best for successful outcome of the International Seminar.

  
(Dr. Ajit Kumar Sinha)

## **PROFESSOR (DR.) MITA BANERJEE**

Former Vice Chancellor, The West Bengal University of Teachers' Training,  
Education Planning and Administration, Kanyashree University  
and Murshidabad University (Additional Charge)

Former Professor Emeritus, Former Pro Vice Chancellor & Former Dean,  
Adamas University Former Chief Advisor, Center for Advanced Studies  
and Research in Education

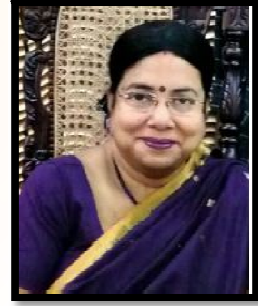
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### **MESSAGE**

As the Guest of Honour, I am deeply honoured to be part of Two-day International Seminar on Digital Technology in Education for Sustainable Development, organized by Uday Memorial B.Ed. College, Ranchi that explores the intersection of digital technology and education in fostering sustainable development. In today's rapidly evolving world, harnessing the power of digital tools and platforms has become imperative in addressing the complex challenges facing education and society at large.

This seminar provides a unique platform for educators, researchers, policymakers, and practitioners to come together, share knowledge, and exchange innovative ideas on how digital technology can be leveraged to advance the goals of sustainable development. Through insightful discussions, collaborative workshops, and engaging presentations, we have the opportunity to explore cutting-edge practices, emerging trends, and transformative initiatives in digital education.

I commend Uday Memorial B.Ed. College for taking the initiative to organize this timely and important event, and I applaud all the participants for their dedication to advancing the field of education for sustainable development. Your presence here today reflects a shared commitment to creating a brighter, more equitable, and sustainable future for generations to come.

As we embark on this intellectual journey together, I encourage each of you to actively engage, contribute your perspectives, and forge meaningful connections with your peers. Let us seize this opportunity to inspire, innovate, and collaborate towards harnessing the full potential of digital technology to build a better world through education.

Thank you.

With best regards,



**Prof. Mita Banerjee**

Former Vice Chancellor, WBUTTEPA

West Bengal

# क्षेत्रीय शिक्षा संस्थान

(राष्ट्रीय शैक्षिक अनुसंधान और परिक्षण परिषद्)  
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Prof. P. C. Agarwal  
Principal




## MESSAGE

It is with immense pleasure that I accept the patronage of the Two-Day International Seminar on "Digital Technology in Education for Sustainable Development" being organized at Uday Memorial B. Ed. College, Ranchi on 27th and 28th April 2024.

In today's world, digital technologies are rapidly transforming the educational landscape. This seminar provides a timely platform for educators, researchers, and policymakers to discuss and explore the potential of digital technologies in promoting sustainable development through education. I am confident that the deliberations at this seminar will lead to valuable insights and recommendations for integrating digital technologies effectively into our educational systems for a sustainable future.

I want to offer my sincere congratulations to the entire team for their outstanding work in putting together this Two Days International Seminar and creating this special souvenir book. Their dedication to promoting fair and inclusive education using digital technology is truly impressive. This commitment doesn't just improve education today but also lays the groundwork for a better tomorrow, where harmony and justice thrive.



(P.C. Agarwal)



## रॉची विश्वविद्यालय, रॉची

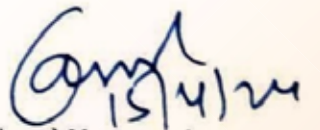


### Message

I am indeed very happy that the Uday Memorial B. Ed., Kadal, Ranchi is organising a International seminar on "Digital technology in education for sustainable development". This theme has great relevance to the digital technology in education for sustainable development.

In a world with diverse cultures, demographics, political ideologies etc. faster progress towards sustainable development needs increased use of digital technologies. Integration of digital technologies like artificial intelligence, digital societies, digital literacy, blended learning, and use of technology can bring the green revolution, etc. with classroom teaching can build awareness, skills, attitudes and values among students in the journey towards sustainable development.

An international seminar on the digital technology in education for sustainable development would be a perfect opportunity for the intellectuals to come together and discuss and suggest the ways in which digital technology can play vital role in education for sustainable development. I extended my sincere and heartfelt good wishes for the grand success of the international seminar.

  
(Binod Narayan)

Registrar



## Message

It gives me immense pleasure to know that Uday Memorial B.Ed. College, Ranchi is organising *A Two-Day International Seminar on Digital Technology in Education for Sustainable Development* from 27 -28April 2024. It is both a privilege and opportunity for the faculty and students of the college to have such a trailblazing international seminar on this emerging issue intimately related to our education as envisaged in National Education Policy 2020.

Education system has always been related to a formal organization working on chalk and talk method, but with the changing time and methods of teaching, a whole paradigm shift is witnessed over the years. The constant development in technology has dramatically transformed the pedagogy during the past decades and evolved computing power in every aspect of our educational life leading towards technology mediated education system.

The National Education Policy 2020 recognizes the importance of leveraging the advantages of technology while acknowledging its potential risks and dangers. It calls for carefully designed and appropriately scaled pilot studies to determine how the benefits of online/digital education can be reaped while addressing or mitigating the shortcomings. In the meantime, digital platforms and on-going ICT-based educational initiatives should be optimized and expanded to meet the current and future challenges in providing quality education for all.

The present International Seminar organized in association with IQAC of the college is a solemn attempt to provide a common academic platform for the academia representing various apex educational institutions of the country and abroad for sharing their ideas, researches, experiments, best practices and innovations and to debate, deliberate, and discuss these relevant issues envisioned in NEP 2020 and help them come out with some tangible insights to implement digital technology in education for sustainable development.

I am quite sure that the deliberations made during the seminar will redefine the strategies to ascertain current issues, concerns and challenges pertaining to digital technology in education meaningfully, and the knowledge generated thereof may be collated for the betterment of future policies and practices in the country. I anticipate that the college will execute this academic event as planned to meet its objectives in true spirit under the able guidance of Prof. Ajit Kumar Sinha, honorable Vice Chancellor, Ranchi University, Ranchi, and dynamic leadership of Dr. Chandan Kumar Pankaj, Principal and convener of the Seminar and his team members of the organising committee.

With all notes of hopes and aspirations, I congratulate to the convener, coordinator, organising secretaries, and all the members of the organising committee, and wish a grand success for this International Seminar.

**Saryug Yadav**  
Professor of English  
DEL, NCERT, New Delhi

**Shree. Santosh Mahto**  
**Chairman**

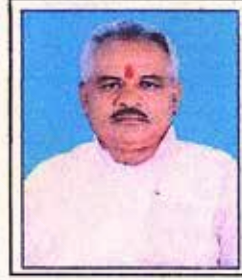
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### संदेश

परिवर्तन के इस महायुग में शिक्षा में सतत विकास के लिए डिजिटल प्रौद्योगिकी का अत्यावश्यक है। हमारे सम्मुख भविष्य स्वर्ण अक्षरों में लिखा सुरक्षित मिल रहा है, क्योंकि इसके लिए बड़े-बड़े शिक्षाविदों के साथ-साथ शोधकर्ताओं ने अपने अन्दर की सम्पूर्ण ज्ञान को कण-कण में निरूपित किया है।

उदय मेमोरियल बी० एड० कॉलेज में दिनांक 27/04/2024 एवं 28/04/2024 को सतत विकास के लिए शिक्षा में डिजिटल प्रौद्योगिकी विषय पर संगोष्ठी का आयोजन किया जा रहा है। इस संगोष्ठी के माध्यम से यह संदेश दिया जा रहा है कि शिक्षा में नित्य नए-नए प्रयोगों के साथ-साथ इसमें डिजिटल प्रौद्योगिकी की आवश्यकता एवं आविष्कार की असीम संभावनाएँ सृजित की जा सकती है।

मैं सेमिनार की पूर्ण सफलता की कामना करता हूँ।

*संतोष महतो*

संतोष महतो  
अध्यक्ष

Mr. Rajesh kumar K andrwar  
Director  
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### **MESSAGE**

It is a matter of great pleasure that IQAC, Uday Memorial B. Ed. College, Kedal, Ranchi, Affiliated to Ranchi University, Jharkhand is going to Organize A Two Day International Seminar On “**Digital Technology in Education for Sustainable Development**” On on 27th and 28th April, 2024.

Sustainable teaching and learning refer to practices in which teachers equip students with the skills and strategies for engaging in lifelong learning that is not defined to the walls of classroom or dependent on a knowledgeable sage. Through this international seminar on digital technology in education for sustainable development teachers promote the sustainable learning practices for the effective 21st century classroom.

Students should realize that these technologies provide affordances for independent and autonomous learning practices that were not available to previous generation and have gained an understanding of how to use them. Topic and sub-topics are really relevance according to the contemporary scenario and enhance the progress of the society and the nation. I am extremely happy to wish the International seminar.

I wish the seminar all success.

Rajesh Kumar Kandwar  
Director



**Dr. Chandan Kumar Pankaj**  
M.A.(Geog.), M.Ed., LLB., Ph.D.( Edu.)  
**Principal**  
Uday Memorial B.Ed. College, Kedal,  
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### MESSAGE

Uday Memorial B. Ed. College, Kedal, Ranchi is organizing a two days International Seminar on “Digital Technology in Education for Sustainable Development” on 27<sup>th</sup> and 28<sup>th</sup> April 2024. I would like to extend my heartfelt gratitude to all the participants, speakers and guests, welcome them to our humble abode and wish them a brilliant session and quality insight.

“A little knowledge that acts is worth infinitely more than much knowledge that is idle.” This statement of great thinker Kahlil Gibran is worth note taking for all at this point of time. Knowledge and application of the knowledge should go hand in hand. But somewhere in the bottom line of the modern education system, knowledge is resulting into a pile of passive information that has very less to do with the active and contributory life of a learner. This has caused the rise of contrasting visions among the academicians all around the world, each with unique insights for the correct system of education.

It’s high time for a serious deliberation on the issue of the sustainable development in a common forum to come to a mutually agreed solution to bring about development sustainably. This International Seminar on “Digital Technology in Education for Sustainable development” is being organized to provide such a forum to thinkers around the world.

I hope the seminar will serve the projected purpose and bring forth novel approaches that may fortify the Sustainable development

Best wishes.....!!!!

(Dr. C. K. Pankaj )

Mr. Mukesh kumar K andarwar  
RTI, Officer  
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### **MESSAGE**

Digital Education very simply refers to the use of technology in education as it uses digital tools, online platforms and interactive content to give everyone access to high quality education, bridge geographically gaps and raise a generation with a wide range of skills for a globally connected world.

Digital Technology is changing education in a lot of ways, but one of the most important is that it makes education easily available to all **Online Learning Systems** let students get to their assignment and learning materials from anywhere with an internet connection. This is very important for students who live in rural and urban places or have trouble going school.

Uday Memorial B. Ed. College, Kedal are organizing a Two Days Seminar at 27<sup>th</sup> April and 28<sup>th</sup> of April 2024 on the topic of **“Digital Technology in Education for Sustainable Development.”** This topic is very important for modern education. Every person have requirement of digital technology to learn education in the modern era. Indian Government has started digital technology in education for sustainable development from 2015.

I wish the seminar all success.

*Mukesh K. Kandarwar*  
Mukesh Kumar Kandarwar  
RTI, Officer

**Mr. Sona Ram Mahto**

**Advisor**

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### **MESSAGE**

I am extremely delighted to know that Uday Memorial B. Ed. College, Ranchi is organizing Two Day International Seminar on "Digital Technology in Education for Sustainable Development" on 27th & 28th April, 2024. I congratulate the organizers for having identified this theme.

The progress, made by India in the arena of economy, digital initiatives, education, science and technology are being closely observed by the world over. India is poised to become a global leader in technology based education and conferences like these will help to achieve that purpose. India is set to create a template for many other developing countries.

I appeal to the civil society to bestow its best attention on promoting education and well being of digital education among us.

I wish the seminar all success.

Sona Ram Mahto  
Advisor

**Dr. Manoj Kumar**

Associate Professor

University Department of Education (M.Ed.)

Kolhan University Chaibasa. Jharkhand. Email ID- [manojjsr2009@gmail.com](mailto:manojjsr2009@gmail.com)

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7488633869



## Message

It is a matter of great pleasure that IQAC, Uday Memorial B.Ed. College, Kedal, Ranchi, Affiliated to Ranchi University Ranchi, Jharkhand is going to organise Two Days International Seminar on "Digital Technology in Education for Sustainable Development." On 27<sup>th</sup> & 28<sup>th</sup> April 2024.

One of the fundamental components of the sustainable development 2030 agenda is quality education. It aims to ensure inclusive and equitable quality education for all. Digital technologies have emerged as an essential tool to achieve this goal. Digital technologies strive to decrease or eliminate pollution and waste while increasing production and efficiency. These technologies have shown a powerful impact on the education system. The recent COVID-19 Pandemic has further institutionalised the applications of digital technologies in education. These digital technologies have made a paradigm shift in the entire education system. It is not only a knowledge provider but also a co-creator of information, a mentor, and an assessor. Technological improvements in education have made life easier for students. Instead of using pen and paper, students nowadays use various software and tools to create presentations and projects.

The theme chosen for the seminar is of great significance and contemporary relevance. I hope that the attending intellectuals should deliberate on the need of the hour in emerging areas and chalk out the road map for future plan of action. I am extremely happy to wish the International Seminar a great success.

*Manoj Kumar.*

**(Dr Manoj Kumar)**

**Dr. Sanjoy Bhuyan**  
Professor and Head  
Department of Education  
Jamshedpur Women's University  
Jamshedpur



## **Message**

I am immensely glad to learn that Uday Memorial B. Ed. College, Ranchi is going to organize two days International Seminar on Digital Technology in Education for sustainable Development on 27<sup>th</sup> and 28<sup>th</sup> April 2024. Digital technology has marked tremendous progress and development in all aspects of life. It's high time that we should look forward and think on harnessing digital technology for sustainable development.

This seminar will certainly bring many stalwarts and young mind across the border in a common platform to churn and find a way to efficiently integrate digital technology in education for a better and conducive future.

I congratulate the entire team of this Seminar and extend my best wishes for a grand success of this Seminar.

**Dr. Sanjoy Bhuyan**  
Professor and Head  
Department of Education  
Jamshedpur Women's University Jamshedpur



शिक्षा विभाग/DEPARTMENT OF EDUCATION  
तेजपुर विश्वविद्यालय/TEZPUR UNIVERSITY

(A Central University established by an Act of Parliament)

नपाम, तेजपुर – 784 028/Napaam, Tezpur - 784 028 दूरभाष/Phone: (03712) 275651  
जिला: शोणितपुर, असम, भारत/District: Sonitpur, Assam, India फेक्स/Fax : (03712) 275650  
ई-मेल/e-mail: [hod\\_edu@tezu.ernet.in](mailto:hod_edu@tezu.ernet.in)

Date: 16/04/2024



**MESSAGE**

It gives me immense pleasure to learn that the IQAC, Uday Memorial B.Ed. College, Ranchi, Jharkhand is organizing a two day International Seminar on the theme “*Digital Technology in Education for Sustainable Development*” from 27<sup>th</sup> to 28<sup>th</sup> April, 2024. Such academic programs are essential to give both the teacher and the students better and greater exposure to their academic pursuits and certainly open up new locus in the teaching learning process. The burgeoning integration of digital technology within the educational landscape has emerged as a pivotal catalyst propelling progress towards the objectives of sustainable development. Furthermore, these digital instruments serve to democratize access to quality education, effectively bridging the historical divide between urban and rural communities, ultimately ensuring inclusivity and equity within the educational sphere. The emphasis placed on digital technology integration within education, as evidenced by India's National Education Policy (NEP) 2020, underscores its critical role in advancing the goals of sustainable development by fostering the integration of digital technology into teaching and learning processes.

My best wishes to the organizing committee of the International Seminar to make it very effective and successful. I wish the International Seminar and the Souvenir published on the occasion a grand success.

**(SASHAPRA CHAKRAWARTY, Ph.D.)**

Associate Professor & Head  
Department of Education  
Tezpur University, Assam



**PROF (DR) SHASHIKANT KUMAR**

### Message

Dear Patron and Delegates,

It is very heartening to note that **Uday Memorial B.Ed. College**, a constituent college of Ranchi University, Jharkhand State is organising a two day International Seminar on “**Digital Technology in Education for Sustainable Development**” in their campus from 27-28<sup>th</sup> April 2024. The seminar expects attendance from international as well as national in both offline and online mode.

The conference centered on very important and timely topic as Digital Technology since global pandemic of COVID-19 has opened a new medium for learning and educating the citizens of the world in 21<sup>st</sup> century. The awaited technology change has made the teaching learning tool more innovative and interactive. The potential for upcoming reform in learning multiple subjects, generating and sharing study materials is immense. The NEP, 2020 opens more options for the student’s right from the primary education to Secondary and higher education. The advantage of our early lead in the remote /distance education (TV), Massive Online Courses (MOOC) and growth of EdTech companies have resulted in right approaches for national and international collaborations. The multi-lingual capacity of the digital materials through the growth of Artificial Intelligence and Machine Learning would be the future of content creation more innovative and transformative.

This is matter of great pride for all of us to be associated with the discussion on the digital technology in education undertaken by B.Ed.College. Both international and national expert’s discussion would benefit the educators and learners. I am sure the experts and scholars attending the seminar will deliberate on the important themes and suggest the roadmap to focus on the thrust areas. The event would provide ideal environment and space of idea exchanges and future collaborations.

I extend my heartiest greetings and felicitations to the organizers and the participants and wish the seminar a grand success.

Warm Regards

**Prof. Shashikant Kumar. PhD (Geography)**

Mrs. Swati Anjana Toppo  
Co-ordinator, IQAC  
Uday Memorial B.Ed. College, Kedal,  
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### MESSAGE

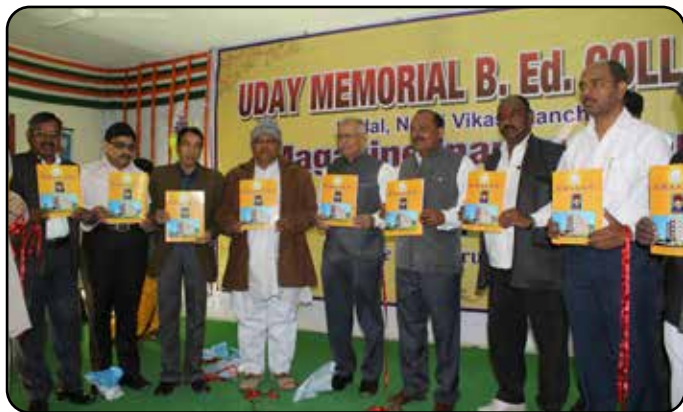
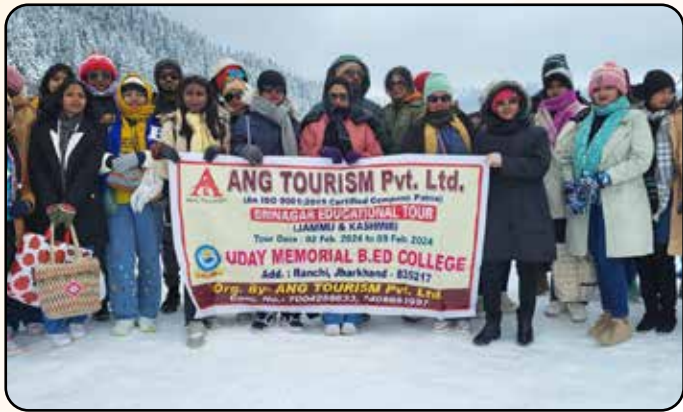
It's my proud privilege to pen down the message for our college Souvenir "UDAYAN", 2024. Martin Luther once said, "If you want to change the world, pick up your pen and write." Therefore, I am happy to be a part of this and witness an array of talents of the students and staff of Uday Memorial B. Ed. College. I identify with the emotion that each page portrays and look upon the magazine as an entity in itself. Education is the one that can remove the darkness and help to build a complete man who can face the different challenges well and lead the society in a proper manner. In the present era of knowledge, driven society, knowledge is generalised and disseminated very quickly.

So, the teachers really need to correlate the knowledge with prevailing environment in a variety of attractive ways for effective learning with use of digital technological aids. Education should awaken the true and depth potential of students to blossom creativity for sustainable growth of students as well as for the growth of society. "UDAYAN" has the glimpses of the achievements, history and journey of our college.

Best wishes.....!!!!

Swati Anjana Toppo  
Co-ordinator, IQAC







## Digital Technology in Education for Sustainable Development: An Indian Perspective

Dr. Saryug Yadav  
Professor of English Language Education  
Department of Education in Languages  
National Institute of Education  
National Council of Educational Research & Training  
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### Abstract

Technology plays a crucial role in the pursuit of sustainable development, and its integration can provide sustainable solutions for energy, agriculture, water, transportation, and waste management, among other areas. However, the role of digital technology in development faces several challenges, including inadequate infrastructure, lack of access to technology, and economic barriers. Sustainability is the efficient and equitable distribution of resources intra-generationally and inter-generationally with the operation of socio-economic activities within the confines of a finite ecosystem. Development is defined as ‘an evolutionary process in which the human capacity increases in terms of initiating new structures, coping with problems, adapting to continuous change, and striving purposefully and creatively to attain new goals. The 4th goal of sustainable development from seventeen sustainable goals established by the United Nations states that, “to ensure inclusive and equitable quality education and promote lifelong learning opportunities” for all by 2030. Sustainable development without quality education is not possible.

The rapid development in technologies is impacting the education sector in a significant way. Technology has revolutionized almost every aspect of human life and therefore we cannot ignore its impact on human behaviour. Technology can be used to control human behaviour and have desirable results to achieve sustainable development. The National Education Policy 2020 accepts a bidirectional relationship between technology and education and therefore announces to create an autonomous body, i.e. The National Educational Technology Forum (NETF) to “provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration, and so on, both for school and higher education” (NEP 56). Nevertheless, India’s high socio-economic disparity, geographical locations, financial conditions and insufficient technological infrastructure cause a digital divide. Inaccessibility of the devices, lack of proper connection, and lack of digital literacy are the major concerns to worry about. The paper is an exploratory study which is descriptive in nature. So, meta-analysis of articles and write-ups in the concerned field of digital technology, education for sustainable development and use of digital technology in education and sustainable development has been thoroughly done. The intend of the study is to highlight the impact of digital innovations in promoting sustainable development in education. From the study it was found that digital innovations and technologies have been playing a pivotal role in attaining

sustainable development goals in education. Although, globally digital technologies were playing crucial role but during the pandemic COVID-19, it has become the saviour of the education system because new circumstances and realities require new initiatives. Due to digital technologies only, the educational practices were continued and post pandemic it has continuously been facilitating innovative practices in teaching and learning. Also, NEP 2020 advocates development of quality education which is the fourth goal from the list of 17 sustainable development goals. The NEP 2020 also recommends promoting digitalization of education which leads to sustainable development.

The present paper is an attempt to deal with all the seminal issues pertaining to digital technology in education for sustainable development with an aim to explore some tangible remedies for the mankind aspiring to live in a sustainable world with a special reference to India. Through this research paper the recommendations for enhancing digital innovations and practices in education for sustainable development have been suggested. It highlights the viewpoint of NEP 2020 on digitization of education for attaining sustainable development with digital technology’s excellences and limitations.

Keywords: Digital technology, Education, Sustainable Development, NEP2020, Life-long learning, Literacy, Human behaviour

## Digital Learning Technology Readiness and Adoption among Higher Education Students

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### Abstract

The purpose of this study is to examine the digital learning technology readiness and adoption of students in higher education based on gender as well as the association between digital learning technology readiness and adoption of students in higher education.

The sample size for this research was 125 students randomly selected from higher learning institutions. The methodology applied in this research includes survey method that used Kaushik and Verma Digital Learning Readiness and Digital Learning Acceptance and Usage (2020) tools to achieve its objectives. Data analysis is conducted using t-test and Pearson correlation test. The study found that there exists no significant difference in digital learning technology readiness and adoption of students in higher education regarding their gender.

Further, there exists significant association between digital learning technology readiness and adoption of students in higher education.

Keywords: Higher Education Students, Digital Learning Technology, Readiness, Adoption.

## “Digital Technology in Education for Sustainable Development”

### Abstract:-

Education for sustainability has become the mechanism for creating a pool of graduates who can understand, appreciate, practice and support the achievement of sustainable development goals (SDGS). In a world with divers cultures, demographics, political ideologies etc. Faster progress towards sustainable development needs increased use of digital technologies integration of digital technologies like artificial intelligence, metaverse, visualization techniques, cloud computing internet of things, open date repositories, geographic information system etc. with classroom, teaching can build awareness, skills attitudes and values among students in the scale up the efforts towards the goals.

Digital education technologies improve fundamental skills such as collaboration, problem solving and global awareness. It can easily connect boys and girls from different parts of the world with the possibility of sharing their content with peers living kilometers away. Equally important, learning technology can open future job opportunities.

In this chapter, the authors have tried to bring out a list of digital technologies and the way in which they can be used in classroom teaching to ensure education for sustainability compartments between those who know the SDGs and those with proficiency in technology. What is also needed is integration between silos fir mapping the digital technologies with the appropriate SDGs. The teachers in the higher education system need more exposure to understand and implement this integration.

Keywords: Sustainable Development, Demographics, Digital, Awareness, Technologies

Dr. Chandan Kumar Pankaj  
Principal  
Uday Memorial B. Ed. College  
Kedal, Neori Vikas, Ranchi

## Digital Technology in Education for Sustainable Development

Mukesh Kumar Kandawar  
Uday Memorial B. Ed. College  
Kedal, Neori Vikas, Ranchi

### Abstract:-

Since the invention of the computer in 1822, new dimensions are being added to digital technology every day. Like:- Google, Facebook, WhatsApp, Instagram etc. In the present times, it is not only necessary but also vital for any person to connect himself with digital technology in some form or the other. Today all information is available in digital technology. Like:- mobile, computer etc. Due to instant availability of any kind of information to any person at any time through digital technology, all the problems and complications of that person are eliminated.

After the Corona period of 2019, education through digital technology has increased suddenly. The education which used to take place inside the four-walled rooms has now been integrated into the personal digital technology of every person through digital technology. The proof of which is:- Khan G.S. Research Centre, Physics wala, Drishti IAS etc. Through digital technology, unlimited opportunities become available to teachers and students in a short time. The answer to any question is available to any person through digital technology in different ways, so that the answer to any question arising in his mind is easily available to any person through digital technology. Easy availability of any question in different ways helps any person to answer the said question in his own way or according to his own.

At present, continuous development is being seen in education through digital technology and the future of digital technology is full of limitless possibilities. There was a time when computers and mobiles were not considered good, but now everyone's attitude has become positive. It is a good thing. New possibilities of digital technology are yet to be added in the future.

## Digital Technology and School Education in the National Education Policy-2020

Swati Anjana Toppo  
IQAC, Co-ordinator  
Uday Memorial B. Ed. College  
Kedal, Neori Vikas, Ranchi

### Abstract:-

After a lengthy wait NEP 2020 is the long-awaited policy that follows 1986. The NEP's dependence on educational technology is commendable, and the policy brings about a dramatic change in every facet of education. The enactment of the New Education Policy (NEP) by the Union Cabinet of India on 29 July 2020 stands as a very significant policy in the 21st century. The approach places significant emphasis on several educational components, including the integration of digital technology, therefore demonstrating its transformative scope.

The use of digital resources in educational settings has shown significant growth in the twenty-first century. Digital technology is crucial in transforming the global economy by facilitating the transition from a reliance on obsolete techniques and technologies to one that relies on cutting-edge digital advancements. In order to safeguard and optimise the potential offered by a system that is substantiated by evidence and technology, it is imperative to give precedence to universal foundational education and eradicate disparities in digital accessibility and utilisation. This post will mostly concentrate on the technology components and execution of the policy.

The use of digital technology in the classroom may enhance students' readiness for both their personal and professional endeavours. In order to effectively disseminate information and skills and address global educational demands, it is imperative to acknowledge the significance of digital technology as a phenomenon in education teaching. Important components of educational technology include platforms and tools that provide instructors with new methods to disseminate material and involve students in active learning. The educational system's capacity to empower and produce desired results will be greatly enhanced by digital technology.

Keywords: Digital Technology, Higher Education, Transformative and Emphasis.

## Poor in technology can never grow in today's scenario

Ms. Salma Tudu  
Assistant professor, Uday Memorial B. Ed. College, Ranchi  
**Abstract:-**

21<sup>st</sup> century learning refers to developing learning literacy and life skills as part of the classroom experience. 21<sup>st</sup> century learning is the accumulation of knowledge, work habits and soft skills, including digital literacy, critical thinking and problem solving, that will help students lead successful careers in the modern workplace. Technology is a gift of God. After the gift of the life it is perhaps the greatest of God's gifts. It is the mother of civilizations of arts and sciences. Technology has certainly changed the way we live. It has impacted different facets of life and redefined living role in every sphere of life. Poor in technology can never grow in today's scenario. We the people live in 21<sup>st</sup> century era, which is called the digital era. Digital technology is the breathing system of every part of our activities. Without technology we are blank in every aspect of life. In this paper we had discussed, poor in technology can never grow in today's scenario. Technology plays an important role in every field of the human needs and the countries development. It is essential component of everyday life.

It may fulfill the each and every aspect of life style. Poor in technology stops our thinking and innovation for higher achievement. Sustainable development very much needed for the digital technology. It will achieve through the use of technology in education.

## Ethical Implications of Artificial Intelligence (AI) in Education: Significance and Strategies for Mitigation

Saswati Priyadarshani

### Abstract:

Artificial intelligence (AI) has the potential to enhance teaching and learning. The integration of AI in education is a work in progress, and it is crucial to assess the implications of new technologies carefully and integrate them methodically into the educational context. On the other side AI driven education also presents significant ethical challenges. The ethical considerations surrounding Artificial Intelligence within the context of education are intricate yet of utmost importance, demanding immediate attention and thorough deliberation owing to several significant ethical issues that have been identified. This paper focuses on the emerging challenges in AI and the need for AI ethics education. It also discusses the ethical implications of AI within the context of education.

Key words: Artificial intelligence (AI), Ethics, Education.

## Education for digital societies toward sustainable goal

Mr. Raihan Fazal  
Assistant Professor, Uday Memorial B.Ed. College, Ranchi

### Abstract

Today's world is going through an unprecedented rapid development of new technology- based innovation in human history, which has created an arena of competition for countries, so countries around the world have formulated national digital development strategies. At the same time, the world is well aware that education will play a key role in rebuilding the global structure in today's digital age. For this reason, developing talented people according to the development of the digital age, promoting digital transformation in the education sector, will become the new mission of education in all countries.

In January 2022, the Chinese government issued a formula for the development of the digital economy during the period of the 14th Five-Year Plan & which further promotes digital education, promotes the sustainable and healthy development of & Internet + Education & and proposed implementation of national digital literacy and skills improvement initiatives. In July 2015, the Modi government of India launched the & Digital India & initiative, a key component of which is to promote digital literacy among the masses. In 2016, the United States released three consecutive reports, including Future Planning and Welcoming the Age of Artificial Intelligence, National Strategic Plan for Artificial Intelligence Research and Development, and Artificial Intelligence, Automation, and the Economy. The intelligence development plan has been comprehensively explained. Digital education application is one of the main contents of this report.

I don't think it is possible to make a correct decision about the future, but I believe that digital education will definitely promote justice and equality in human society and create more opportunities, so I am optimistic for the near future.

## Enhancing Digital Education Pedagogy and Curriculum under NEP 2020

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### Abstract

Digital pedagogy has been formally acknowledged by the NEP 2020 as playing an important part in the Indian education system, spanning from basic to postgraduate. Both the NEP 2020 and the Union Budget 2022-2023 have set up specific funds to support and execute it. A more modern digital pedagogy is required to significantly revamp India's schoolteacher education system in this technological age so that the country may produce more qualified preceptors. The use of digital tools is revolutionizing the way ideas are learned. Our educational system relies heavily on digital resources to enhance the efficacy and efficiency of teaching

and learning. Since the novel audio-video function activates cognitive components in a kid's brain, digital tools not only make learning more enjoyable for all students, but they are particularly helpful for child learning. Digital pedagogy focuses on equipping students with the skills to navigate and navigate the digital world, rather than just teaching them how to utilize technology. The curricular and pedagogical advancements in online and digital education are presented in this paper. In keeping with the goals of the NEP, 2020 strategy, it creates a framework to facilitate open online courses that are provided across a range of platforms, all with the goal of raising educational standards. Higher education institutions must be prepared to provide alternate, high-quality learning options in the event that the rising number of illnesses and pandemics makes conventional, in-person teaching techniques impractical. The NEP, 2020 recognizes the importance of digital and online learning.

Keywords: Pedagogy, Educational, Components, Revolutionizing and Technological

## Use of Technology and Online Resources in Teaching Learning Process

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### Abstract:-

Undoubtedly the use of technology, during and after the Covid-19 lockdown period has increased dramatically not only in the field of teaching and learning but also in every field of human activity. All the aspects of our life are impacted, including education. In an age determined to get new paths to quality education, ICT brings forward countless of advantages, enabling children with the proper skill and outlook to remain ahead in the increasingly aggressive rat race. Digital technology and marketing not only change the perception of learning and teaching, but also change their attitude towards the utilization of online resources or cyber resources.

There is great need of digital infrastructure and safe platform, better internet connectivity, and well equipped cyber professional in developing countries like India Educational institutions is evident with the increasing use of cyber resources for better and effective use of teaching material in teaching and learning process This is why variety of faculties is increasingly integrating ICT in their grade school education system. Through this unique pedagogies, student gain a genuine learning experience, collaboratively constructing their own knowledge and applying their learning's during a real-world context.

Keywords: Outlook, aggressive, uncomplicated, cyber resources, Digital.

## Role of digital literacy in improving teaching competency: A study on Indian secondary education

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### Abstract:-

Teaching as a profession has changed to meet society's budding needs, goals, and realities. To achieve best learning outcomes, instructors must possess a variety of skills, including classroom management, resource management, and the ability to observe behavioral changes in pupils. The significance of a teacher as a builder of future generations requires the most capable, digitally efficient, motivational and creatively crafty individuals be accepted into this noble profession. Technology has facilitated the creation of pre-service and in-service teacher education programs.

As there is a growing need for competent teachers at all levels of education, and teacher education programs that claim to generate competent teachers must be evaluated based on how well they develop the competencies, skills, and attitudes required for successful teacher functioning. This article tries to identify the need for digital literacy training for teachers in Indian schools. It also examines the importance of technological adaption among instructors in order to increase their ability. The study is descriptive in nature which is relying on analysis of the secondary data for investigation. This study would seek to discover how instructors might improve technologically in order to satisfy their upcoming teaching obligations.

Keywords: - Teaching competency, digital literacy, training need, opportunities

## Digital literacy and skills for online education

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### Abstract:-

Digital literacy refers to the skills required to effectively search, evaluate, utilize and communicate using digital technology. It includes abilities ranging from basic tasks like sending email or browsing the internet to more complex activities or tasks like coding or digital content creation. At present, digital literacy and skills are very important for online education. In this type of education,

people are studying in a digital environment. At present, smart phones, social media, e-commerce, critical thinking, problem solving and cyber security awareness are becoming a necessity for people.

As we are entering the digital age, we have started understanding their utility and importance and it is becoming a fundamental need. It is a fundamental skill that empowers us to move forward in the digital age. Digital literacy is not just a skill but a necessity. Today, to promote digital literacy and skills, students are being provided education from school level itself, along with workshops and training are being provided from time to time, online resources are being made available.

Today, through online education, information about all things can be obtained in a short time while sitting at home. Digital literacy and skills are essential for people to participate in technologically informed society, have educational success, good career in the future, and employment prospects. Digital literacy and skills empower individuals to access information, communicate effectively, secure employment, think critically, solve problems, and navigate the digital landscape responsibly.

Key words: - Digital, Technology, Literacy, Resources, Smartphone, Social media, Cyber security

## Teaching and Learning Method for Smart Education

### Abstract:-

In the era of smart technology, the landscape of education is rapidly evolving to embrace innovative teaching and learning methods. This paper explores the integration of technology into education through a comprehensive approach aimed at enhancing student engagement, collaboration, and knowledge retention. The methodology involves the use of interactive multimedia tools, personalized learning platforms, and adaptive assessment strategies to cater to diverse learning styles and preferences. By leveraging the capabilities of smart devices and artificial intelligence, educators can create dynamic learning environments that foster critical thinking, creativity, and lifelong learning skills. Furthermore, the paper discusses the importance of teacher training and professional development to effectively implement these methods and maximize their impact on student outcomes. Overall, the proposed teaching and learning method for smart education represents a paradigm shift towards more efficient, effective, and inclusive educational practices in the digital age.

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## Digital Skills: Increasing Teacher's Digital Literacy

### Abstract:-

Digital literacy is commonly known as an individual's ability to find valuable content, evaluate it thoroughly and communicate it virtually or digitally with other people. It can also be defined as knowledge and awareness about the digital world. In the 21st century, the importance, value and need of digital literacy cannot be sidelined, especially for teachers. The world of education is now running online, students are more comfortable in continuing their studies online. In order to fulfil the educational needs of the students, teachers need to keep themselves updated with the latest technology and teaching trends.

As education systems and ministries worldwide continue to adapt to the pandemic and its aftermath, it's clear that digital education technology is now embedded in mainstream education. Teachers often struggle to implement educational technology in their classroom, which has been exacerbated by the sudden need to use multiple platforms, interfaces and modalities. This is especially true within classroom setting, where its often blended with traditional, paper-based method.

The challenge is to increase digital literacy across the teaching profession to embedded digital skills within professional development rather than as an added requirement.

Research Scholar  
Priyanka Kumari

## E-Commerce Education: Bridging the Digital Divide for Sustainable Business Growth

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### Abstract:-

In today's rapidly evolving digital landscape, the integration of e-commerce education has become imperative for sustainable business growth. This abstract delves into the significance of e-commerce education in bridging the digital divide and fostering sustainable development. E-commerce education plays a pivotal role in equipping individuals with the necessary knowledge and skills to navigate the digital realm effectively. By providing insights into online marketplaces, digital marketing strategies, and e-commerce platforms, education in this field empowers entrepreneurs, businesses, and consumers to engage in the digital economy efficiently.

The concept of bridging the digital divide through e-commerce education emphasizes the importance of ensuring equal access to digital resources and opportunities for all individuals, irrespective of their background or location. By offering comprehensive e-commerce education programs, we can bridge the gap between those who have access to digital

technologies and those who do not, thereby creating a more inclusive and sustainable business environment. Moreover, the sustainable business growth facilitated by e-commerce education goes beyond mere economic prosperity. It encompasses ethical business practices, environmental responsibility, and social impact. E-commerce education instills principles of sustainability, encouraging businesses to adopt eco-friendly practices, promote social welfare, and uphold ethical standards in their operations. By embracing e-commerce education as a tool for sustainable business growth, organizations can enhance their competitiveness, expand their market reach, and contribute to the overall well-being of society.

This abstract highlights the transformative power of e-commerce education in driving sustainable development and fostering a more inclusive and equitable digital economy. In conclusion, e-commerce education serves as a catalyst for bridging the digital divide and promoting sustainable business growth. Through comprehensive education initiatives, individuals and businesses can harness the power of digital technologies to create a more sustainable, ethical, and prosperous future for all stakeholders involved in the digital ecosystem.

Keywords:- E-Commerce Education, Business Growth, Digital resources and Opportunities

## Training & Learning method for smart education

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### Abstract:-

Smart teaching, smart learning, smart schools, and smart strategies are the four important elements of advanced education. The development of education of any society and country can be effective only when these four elements are correctly determined.

Smart education is:-

- Critical thinking • Creativity
- Communication • Learner Oriented
- Collaboration • Any time/ Any where

In general terms, smart education is the holistic education of students using modern technology that fully prepares them for a rapidly changing world. Smart education teaches students to adopt ways of accessing global education outside of traditional education. Smart education emphasizes critical thinking, problem-solving, and analytical skills. Interactive learning activities, simulations, and real-world scenarios challenge students to think beyond the surface and develop the skills necessary for success in the modern workforce. Thus, the smart teaching system is a learning platform that combines the benefits of powerful models, technologies, and modern tools to help teachers and students reach their full potential. It is a great strategy for building teaching effectiveness and efficiency.

By using advanced teaching methods like online



classes, virtual learning environments, cloud servers, computers, smart phones, etc., a teacher can provide more effective education to their students. In this education, teachers also have to adopt modern skills like analysis and evaluation methods and learn to apply them in the traditional classroom using information technology. Smart teaching methods help teachers develop more effectiveness. For smart education teachers have to adopt some teaching strategies such as :-

- Adopt research-based teaching strategies
- Focus on student learning
- Know about the necessary apps and software
- Prefer to create an instructional model
- Find a teaching framework before starting to teach

Keyword: Creativity, Critical thinking, Collaboration

## Ethical Considerations in AI-Driven Education: Striking the Right Balance

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### Abstract:-

The integration of artificial intelligence (AI) in education has been a transformative development, promising to enhance learning experiences and outcomes. However, as AI technologies become more prevalent in educational settings, it is crucial to address the ethical implications associated with their use. In this article, we explore key ethical considerations in AI-driven education, emphasizing the need to strike a balance between innovation and responsibility.

### Ethical Principles for AI in Education

#### 1. Transparency in Algorithms:

Transparency is essential when deploying AI systems in education. Educators, students, and other stakeholders should have a clear understanding of how algorithms work, including their decision-making processes. Transparent algorithms allow for scrutiny, accountability, and trust-building.

#### 2. Addressing Bias:

AI algorithms can inadvertently perpetuate biases present in training data. To mitigate bias, developers must actively identify and rectify discriminatory patterns. Regular audits and ongoing monitoring are necessary to ensure fairness and equity.

#### 3. Safeguarding Student Privacy:

Protecting student privacy is paramount. AI systems collect and analyze vast amounts of data, including personal information. Institutions must implement robust privacy policies, secure data storage, and informed consent processes to safeguard student privacy.

#### 4. Empowering Stakeholders through Education:

Educational stakeholders, including teachers, administrators, and students, should receive training on AI technologies. Understanding AI capabilities, limitations,

and ethical implications empowers stakeholders to make informed decisions and advocate for responsible AI use.

#### 5. Learner Autonomy and Agency:

AI should enhance learner autonomy rather than diminish it. Students should have control over their learning experiences, including the ability to opt out of AI-driven interventions. Balancing personalized recommendations with student agency is critical.

#### 6. Transparency and Accountability:

Educational institutions and AI developers must be transparent about the purpose, functioning, and impact of AI systems. Accountability mechanisms should be in place to address any unintended consequences or ethical breaches.

#### 7. Equitable Distribution of AI-Enabled Resources:

AI should not exacerbate existing inequalities. Efforts should be made to ensure that AI-driven resources, such as personalized learning tools, are accessible to all students, regardless of socioeconomic background.

Keywords : Education, AI systems, Teachers, AI developers, Development

## Teaching and learning method of Smart Education

### Abstract:-

Advances in information technologies present opportunities for novel approaches, methods, and tools for new or improved education and training practices. Furthermore, these technologies are enabling a shift in the education paradigm. Based on an investigation of a wide range of information technologies supporting smart education, we developed a Smart Education Framework. The framework conceptually structures the information technologies in a layered architecture. We also developed a smart education design approach based on the framework. Furthermore, we show how to use the framework and design approach to develop a specific course or lecture design.

Recent advances in information technologies are affecting our education and training approaches, methods, practices, and tools. Increasing internet speeds and storage areas together with the advances in cloud computing technologies, making the information available to everybody, from everywhere, at all times. Traditional training and education methodologies, in which the instructor explains the subject in the classroom and the students complete the exercises at home, are replaced by new learning approaches such as distant learning, mobile learning (m-learning), personalized learning, flipped and blended learning, social collaborative learning, game-based learning, Information and communication technologies are creating the potential for more self-paced, interactive, and personalized learning. As new information technologies are introduced, we are moving from traditional education towards smart education.

Smart Education: We define smart education as the “effective and coherent use of information and communication technologies to reach a learning outcome using a suitable pedagogical approach”.

Evaluate design effectiveness: We evaluate the

effectiveness of our smart education design based on our experience during the activity and student feedbacks. In this step, we may also go back to previous steps and revise or improve our educational design.

Evaluate course effectiveness:

This is also an evaluation step. In the previous step, we evaluate the design. In this step, we evaluate whether we are successful in achieving our educational goals. Based on the evaluation, we may repeat the process from the start. One key aspect of our smart education design approach is the continuous improvement loop. We should always seek ways to improve our educational design. The fast-changing technologies necessitate such an improvement loop.

A summary of the findings are presented below:

The smart education framework (SEF) has the capability to describe all the identified Smart Education Systems (SESs).

The earliest SESs identified is reported in 2010. The latest one is reported in 2020. Most of the SESs are architectural designs at this point. Only a few SESs are partial or prototype implementations.

All identified SESs are based on a learning/teaching approach. Personalized, Individualized, Adaptive, Interactive, Ubiquitous, Collaborative, Flipped, Blended, Case-based, and Challenge-based learning are among these approaches.

Almost all identified SESs utilize a type of software providing various features of learning management systems. The identified SESs include at least one type of IT from each layer. Ambient intelligent classrooms, smart classrooms, virtual classrooms, interactive books, e-books, learning analytics, academic tubes, virtual reality, augmented reality, gesture-based computing, cloud computing, mobile devices, web 2.0, and social networks are information technologies used in SESs. Learning analytics, e-books, mobile devices, and cloud computing are commonly used in current SES proposals or implementations.

Thanking you

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## **Training teachers for digital literacy on the context of teacher professional development**

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### **Abstract:-**

Digital literacy means the use of modern technology which is the use of information and communication technology for work both on personal and social level. The main function of these technologies is the use of computers for finding something, enhancing sharing and displaying information on the internet. Digital literacy is one of the

necessary competencies of modern people as well as a crucial skill set for teachers in today's technology-driven world.

Teacher's role started to be more complex in this changing world where knowledge is unlimited. Today teachers are expected to become technology oriented to be more co-operators, open minded, critical independent professionals and facilitators who will help students to analyze the quality of new sources and how to learn in a digital environment.

Therefore, no wonder that teachers are facing new challenges everyday with respect to students, their individual needs, new hardware and software and their own professional needs. So digital literacy is one of the most important skills for the personal as well as professional development of teachers. It enables educators to effectively integrate technology into their teaching practices, engage students in digital learning experiences and enhance their own professional development. By developing their digital skills, teachers can engage in continuous professional development, explore new instructional strategies and adapt to the changing needs of students in the digital age. It also enables teachers to connect with colleagues, expert and educational communities online. Through social media, professional learning networks, teachers can share information, exchange ideas, seek feedback and engage in collaborative projects that enhance their teaching practice and help in their professional development.

Teachers can use digital tools to create individualised learning pathways, provide real time feedback, track students' progress and offer personalised support to help students succeed. It also enables teachers to assess students' learning outcomes, identify areas for improvement and adjust teaching strategies based on data-driven insights.

In conclusion digital literacy plays a vital role in professional development of teachers by empowering them to enhance their teaching practices, engage in lifelong learning, collaborate with peers, personalised instruction and make data-informed decisions.

## **Digitalization and blended learning: A perspective**

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The ways that we choose educational tools need to evolve in light of the reality of digitalization. The utilization of digital technologies is essential to the modern educational process. Blended learning has emerged and grown as a result of digital technologies. But technology alone does not determine its efficacy. In this regard, considerable emphasis is paid to the human component. Learning exchanges Diagnosing the degree of digital competency in advance of creating and executing blended learning is necessary. The Digital Competence Framework for Citizens is a widely used instrument for this purpose. An examination of the

experimental implementation results of blended learning in the industrial sewing training for intended masters was conducted in order to shed light on the characteristics of its use. It was discovered throughout the research that information and data literacy, communication and teamwork, and problem solving are the three most crucial digital competency areas for the variable learning establishment in the training of future professionals. Additionally, proficiency in problem solving raises one level of proficiency in all other areas.

The respondent's degree of digital competency mostly aligns with the features of the basic and secondary levels. The information gathered made clear why students taking distant courses experience challenges, lower motivation, and lower cognitive activity—resources learning intended for mixed education. Therefore, using the Digital Competence Framework for Citizens in the early stages of blended learning implementation can be a sensible way to combine in-person and online learning tools.

Keywords: Blended Learning, Digital literacy, Education, Digital competence.

## Integration of Technology of education and learning

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### Abstract:-

Technology integration is the well-coordinated use of digital devices and cloud computing as tools for problem-solving, deeper learning and understanding. In today time, it has become very important to have information regarding this because if we give information regarding this to the pre-service teachers, then when they come to school as teachers, they will be able to solve all types of digital data and related problems at their own level. This can be done easily, which is very difficult in today government system has become necessary. The main subjects which are mainly learned in today time are Online learning and blended classroom, project-based activities incorporating technology, Game-based learning and Assessment, learning with mobile and handheld devices, Instructional tools like interactive white board and student response system.

The biggest problem facing teachers in the education world today is the integration of technology, which the state government is trying to solve and this is possible only when our entire education system becomes technology based so that it can integrate technology in learning. Integrating technology provides students with the opportunity to develop skills that are essential for lifelong learners, such as research, collaboration, communication, critical thinking, and problem solving. Today schools are getting many learning devices but due to not being able to utilize them properly, they are being kept in sacks or boxes in schools, which is being seen as the biggest challenge before the teachers in digital form which can be solved by integration of technology.

## School Curriculum Learning Under NEP 2020

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### Abstract:-

The National Education Policy (NEP) 2020 of the Indian government puts a significant focus on school curriculum learning. The objective of this policy is to assist students in bridging the gap between the theoretical information they acquire in the classroom and the practical application of that knowledge in real-life settings. A number of different methods to our school curriculum learning highlighted in the National Education Policy 2020 (NEP 2020), including inquiry-based approaches, trans disciplinary teaching and learning, arts integration, and sports education initiatives. Insufficient time and resources are crucial factors for successful school curriculum learning. The use of new teaching and learning strategies should be something that educators are willing to investigate. On the other hand, since students in India come from a wide variety of backgrounds, teachers in India can have a difficult time meeting the specific requirements of each student alone.

In this article, we investigate the challenges that educators face when they are attempting to enhance the chances for school curriculum learning. The purpose of this study is to highlight the significance of experiential learning by analyzing relevant literature and past research. In addition to this, it investigates the challenges that prevent its harmonious incorporation into the instructional and learning process and offers potential strategies to address these issues. Even if there are already programs in place in this field, the Indian government needs to make it a priority to take further steps to improve the incorporation of real-world experiences into elementary, middle, and high school education.

Keywords: School curriculum learning, Knowledge, Significance, Challenges and Classroom

## The Impact of Digital Technology on Teacher Education

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### Abstract:-

The development of society has been significantly impacted by the introduction of digital technology. Teachers in the modern day must become digital networkers as they guide their pupils to become agents of change via the use of intelligent technology, a position that is increasingly important in the educational landscape. A smart classroom, equipped with magnetic induction-enabled boards, might improve teaching and learning methods via real-time technology-driven information interchange, which could have a long-lasting effect on students' cognitive development. Computers and teaching software have become commonplace in classrooms across many grade levels.

In today's world, schools equipped with state-of-the-art technology are supposed to make us happy. In order to achieve their goals, educators must recognize the limitations of traditional teaching methods, as emphasized in this article. Educators have faced several challenges in recent decades while trying to adapt to different educational paradigms. Among these include handling large-scale educational institutions, using collaborative teaching methods, utilizing technology in the classroom, adapting to comprehensive school frameworks, and embracing novel mathematical and scientific procedures like Nuffield science. The mastery and competence of these technologies by the instructor determines the extent to which technology may enhance students' academic achievement in the classroom. The significance of teacher education in using technology to raise students' academic achievement is investigated in this research study.

Keyword: Teacher Educator, Achievement, Comprehensive and Digital Technology

## Poor in technology can never grow in today's scenario

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### Abstract:-

The 21<sup>st</sup> century is considered to be the era of Science and technology. New discoveries and technology in science have played an important role in our lives. New inventions and technology are making an impact in every area of our lives because technology makes our work much easier and less time consuming. The field of education has also not been able to escape its impact. The use of digital technology in education has brought a new revolution in the field of education. In such a situation, one who is weak in technology cannot develop in today's scenario. With the help of modern technology, many digital and important tasks can be completed with ease and efficiency. The importance of educational technology also cannot be ignored in the field of education. With the advent of technology in education, computer, projector, visualization tools and other online mediums, it has become easier for teachers to teach and students to study.

The learning and learning process is made more effective by entertainment. Technology used in education has become a great source for teachers to help them understand any concept easily, in such a situation, lack of knowledge of technology can create problems for us, it will not be possible to do objective and effective teaching and learning. Today the normal classroom has been transformed into a smart classroom. Various types of digital and live audio-visual materials are being used. In the absence of technical knowledge, the teacher will be unable to full fill the objectives of teaching in his class, which will not do justice to his profession and will prove to be a hindrance in his professional and personal development.

## ICT in Higher Education: An Analysis of the National Education Policy 2020

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### Abstract:-

The New Education Policy (NEP) was one of the most consequential policies of the 21<sup>st</sup> century when it was enacted by the Union Cabinet of India on 29 July 2020. The policy is expansive in its innovative reach and emphasizes many facets of education, including the integration of information and communication technologies (ICTs) the use of in the classroom has grown substantially since the turn of the century. A key component in changing the outlook for the global economy is information and communication technology, which helps to bridge the gap between an economy dependent on outdated methods and tools and one dependent on state-of-the-art digital advancements. To protect and make the most of the opportunities presented by a system that is evidence- and technology-supported, we must priorities universal fundamental learning and eliminate digital gaps in access and use.

The technological aspects and implementation of the policy will be the primary focus of this piece. Students will be better prepared for their personal and professional futures via the use of ICT, which will also enhance the classroom experience. The widespread availability of information and communication technologies has caused significant shifts in the makeup and delivery of education in today's schools. The integration of technology into educational curriculum has a profound impact on students learning experiences. In order for higher education to meet the expectations of a globalized student body and impart relevant knowledge and skills, the use of information and communication technology (ICT) is required.

Keywords: Information and Communication Technology, Innovative, Expansive and Professional

## International Collaboration in Educational Technology (Global Perspective on Digital Education)

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### Abstract:-

Educational Technology can be a powerful tool for enhancing international collaborations in higher education, but it also requires careful planning, coordination and evaluation. In this article, we will learn some of the best ways to use technology for creating, maintaining and improving international partnerships, projects and programs. We will also discover some of the common challenges and pitfalls to avoid when using technology for cross-cultural communication and learning.

There is no one-size-fits-all solution for using educational technology for international collaborations. We need to consider several factors, such as the availability, reliability, cost and compatibility of the technology platforms and devices that we will use. We also need to take into account the different levels of digital literacy, preferences and expectations of our collaborators.

Some of the common technology tools that can facilitate international collaborations include video conferencing, cloud-based storage and sharing, online learning management systems, social media and mobile applications. We should test and troubleshoot our technology before and during your collaboration to ensure smooth and effective communication and interaction. Real-time communication and interaction are essential for successful international collaborations in science, education and business.

Using educational technology for international collaborations can be a rewarding and enriching experience but it can also pose some challenges and difficulties. We need to evaluate and improve our collaboration regularly and systematically, using both quantitative and qualitative methods. We should collect and analyze data on the inputs, outputs and outcomes of our collaboration, such as the number of participants, the quality and quantity of outputs, the impact and satisfaction of the stakeholders and the lessons learned and best practices identified. We should also use technology to solicit and provide feedback, recognition and support to our partners and to celebrate and share our achievements and challenges.

**Keywords:** Education, Technology, Planning, Coordination, Collaboration, Digital Literacy, Social Media, Mobile Applications, Video Conferencing, Online Learning and Cross-Cultural Communication.

## Blended learning in context of digital form

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### Abstract:-

Today's changing time and demand of time have brought digital revolution in every aspects of life. The field of education is also not untouched by this. Without digital form, without the use of modern technology, the modern educational process is incomplete or it is not possible to complete the teaching learning process. The use of technology in the field of education reflects the emergence and development of blended learning. Blended learning is also known as mixed mod instruction or wave enhanced instruction is an approach to education that combines online educational material and instruction with the physical based classroom method. The process of blended learning in digital forms certain by involves a variety way of oral and written communication in the face to face meeting and communicate through digital technology, communicate on social network with the help of mobile application. Blended learning in context of digital form is more effective. Students work with new concept while receiving direction from the teacher with digital instruction at the same time which helps the student to learn according to his ability. This kind of Concept helps all students to reach their full potential as well as facilitate a simultaneous Independent and collaborative learning experience.

Therefore, in today's era, it has become very necessary to incorporate blended learning in the context of digital form at all points in all areas so that all future teachers can be digitalized in the future.

## Training Teachers for Digital Literacy on the Context of Teacher Professional Development

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### Abstract:-

This article has been developed for the theoretical and practical considerations of professional development of teacher student. Teacher professional development involves a continuous process of reflection, learning and action to further a teacher's knowledge and skills. Teacher education needs to be adequately strengthened and upgraded to accommodate the changing role of the teacher. Taking care of the tools required for the profession and updating one knowledge related to the profession periodically from the

crux of professional development. Professional development of teachers constitutes developing awareness about their role and responsibilities. Professional development could be a lifelong process. Which demands on the part of the teacher commitment to the work. Teacher development is contrasted with teacher training and teacher education.

Computer has been an addition to the field of education. It has occupied a prime of place as an important tool of teaching- learning process. Use of technology has been rapidly changing and the present form is available in the form of information and communication Technology or ICT. ICT employer a range of tools and resources to communicate, disseminate store and manage information. Digitally literate students teachers know how, why and when to use digital tools. They can spot opportunities to take

Advantage of them when adding a new level of creative expression to a project. It improves their academic performance, digital literacy helps the skill to effectively use technology and the knowledge and skills to do safely and responsibly. So this way digital literacy helps to update and upgrade training teacher professional development.

Keywords- Training teacher's digital literacy, professional development

## **Innovative Approaches to Sustainable Development Education through Digital Technologies: Increasing Access to Literature and Poetry on Nature Protection**

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### **Abstract:-**

In the contemporary landscape of education, the integration of digital technologies has become indispensable for advancing sustainable development goals. This research paper explores the transformative potential of artificial intelligence (AI) tools, particularly Sora, in analyzing poetic texts and generating visual representations to enhance digital education initiatives focused on sustainable development. Through its sophisticated natural language processing capabilities, Sora can decipher the imagery, themes, and emotions embedded in poetry, offering valuable insights into the author's intent and facilitating deeper comprehension. Building upon this analysis, Sora utilizes machine learning algorithms to generate visually compelling representations that complement the textual content and engage learners in critical reflections on environmental themes. By integrating AI-driven visual aids into digital education platforms, educators can create immersive learning experiences that promote environmental awareness, ecological literacy, and active engagement with sustainable development challenges.

In the face of accelerating climate change, rising global temperatures, and escalating threats to biodiversity, the urgency to raise awareness and advocate for environmental protection has never been more critical. In this digital age, artificial intelligence (AI) tools like Sora offer a promising avenue to leverage classical texts on environmental protection and science to amplify awareness on climate change, global

warming, and conservation efforts for nature and wildlife. The potential of AI tools, specifically Sora, in analyzing poetic texts and generating visual representations to enhance digital education for sustainable development is commendable.

Through its ability to interpret the imagery, themes, and emotions conveyed in poetry, Sora offers a unique approach to complementing textual content with visual aids, including illustrations, digital artwork, and suggested photographs. While the interpretation of poetry remains subjective, Sora algorithms contribute to enriching the reader experience by generating a diverse range of visual ideas that align with the poetic imagery and promote deeper engagement with the text.

Keywords: Education, Sustainable Development, Artificial Intelligence, Sora

## **Restructuring school curriculum and pedagogies through digital technology under NEP 2020**

### **Abstract:-**

One of the most well-known legacies of the national policy on education 1968 is the "10+2" structure of the school education system on extremely important and influential recommendation for the time which helped to standardize and uniform the structure of the school education across the country. In many parts of the country, the 12 years of the 10+2 system have been referred to as grades/classes 1-12 with grades 1-5 the primary stages grades 6-8 the upper primary stage grades 9-10 the secondary stages and grades 11-12 the higher secondary, pre university intermediate junior college stage.

While the 10+2 system of school education has served the country well over the past 50 years and had been an important step forward in uniforming the school education structure in India modern times and needs with respect to employment and beyond together with advances and discoveries in cognitive science have also made clear that a new structure for the educational system is required in order to deliver the vision of education also made clear that a new structure for the educational system is required in order to deliver the vision of education

Enunciated in this policy and to prepare our students optimally in the 21<sup>st</sup> century.

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## **Technology in education:- decrease paper and photocopies costs, promoting concept of "green revolution"**

Aparna Bhakat

### **Abstract:-**

The proliferation of technology within educational settings has presented unique opportunities to enhance learning

while concurrently promoting environmental sustainability. This paper explores the impact of modern technology on reducing the reliance on paper and photocopying in educational institutions. Technological interventions have significantly transformed traditional pedagogical methods and resource management within schools and universities. With the advent of digital platforms, there is a discernible shift away from paper-based materials to electronic texts, virtual assignments, and digital communication channels. The implementation of Learning Management Systems, e-books, and online resource repositories has decreased the necessity for printed materials, consequently reducing the environmental impact linked to paper production and waste.

Moreover, by replacing physical copies with digital files, educators and students can partake in an interactive and dynamic educational experience that allows for real-time updates, feedback, and collaboration, unhindered by geographical constraints. The integration of digital tools has not only streamlined administrative tasks—significantly cutting down on the volume and handling of paperwork—but also fostered inclusive access to quality education through open educational resources. However, while the digital revolution in education suggests a promising trajectory toward lessening paper dependency, challenges such as digital divide, cyber security, and the need for effective digital literacy remain. This paper delves into both the benefits and potential drawbacks of adopting digital technologies in education, aiming to provide a comprehensive overview of the current landscape and future directions. In doing so, it sheds light on the critical role of educators and policymakers in crafting sustainable, technology-oriented educational practices that are both effective and mindful of their environmental footprint.

Keywords: digital revolution, digital literacy, environmental footprint,

## Ethical Considerations in AI Driven Society

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### Abstract:-

The integration of digital technologies within education presents a powerful opportunity to equip learners with the knowledge and skills necessary for a sustainable future. This paper explores this potential, focusing on the ethical considerations that arise in an AI-driven society. Within this landscape, the integration of artificial intelligence (AI) presents both opportunities and challenges, particularly concerning ethical considerations. This abstract explores the intersection of digital technology, education for sustainable development, and the ethical dimensions of AI-driven education.

While AI offers personalized learning experiences, improved accessibility, and data-driven insights into student progress, ethical concerns must be addressed. Issues like bias in algorithms, student data privacy, and the potential for AI to exacerbate social inequalities demand careful consideration. The paper delves into these challenges, proposing strategies for ensuring equitable access to AI-powered education while mitigating potential biases. Furthermore, it explores how

educational practices can cultivate critical thinking skills that empower students to become responsible citizens in a world increasingly shaped by AI.

To address these ethical challenges, robust regulatory frameworks, ethical design practices, and ongoing education and awareness initiatives are essential. Furthermore, fostering a culture of ethical leadership within educational institutions is crucial for guiding responsible AI implementation and decision-making processes. By fostering a nuanced understanding of the ethical landscape surrounding AI, this paper aims to guide the development of a digital education system that promotes both sustainability and a just society. By addressing ethical concerns proactively, stakeholders can ensure that digital education becomes a powerful tool for fostering inclusive, equitable, and sustainable development in the digital age.

## Teaching and Learning method for Smart Education

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### Abstract:-

Teaching and learning method for smart education plays a pivotal role education for sustainable development, offering innovative solutions to integrate sustainability principles into the learning process. By using digital tools, educators can create mesmerizing and interactive learning experiences that transcend traditional classroom boundaries, fostering a deeper understanding of sustainability issues among students.

The integration of teaching and learning method for smart education allows for the utilization of resources like online courses, virtual simulations, and interactive platforms that can simulate real-world problems and their solutions. This not only makes education more accessible but also encourages collaborative learning, where students from diverse backgrounds can connect, share ideas, and work on projects that promote sustainable practices.

Moreover, teaching and learning method for smart education enables the collection and analysis of data to inform sustainable decisions. Educational institutions can use technology to track resource usage, manage waste, and optimize energy consumption, serving as a practical example for students to learn about sustainability in action.

The use of teaching and learning method for smart education in education also prepares students for the future workforce, where digital literacy is increasingly crucial. By integrating digital technology in education for sustainable development helps to provide digital skills training, students are equipped with the knowledge and competencies needed to contribute to a sustainable economy.

However, it is essential to ensure that the smart education does not widen the gap in the education quality. Equitable access to technology must be a priority to ensure all students benefit from digital advancements in teaching and learning method for smart education.

## Restructuring School Curriculum and Pedagogies Through Digital Technology under NEP 2020

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### Abstract:-

Education plays a powerful role in building a nation. Education decides the future of the nation and the destiny of its people. The impact will be long-lasting one in terms of growth and development of the nation and its citizens. The role of education and its importance cannot be overlooked in today's world. The National Educational Policy (NEP) 2020, introduced by the Indian government. It is the first education policy of the 21<sup>st</sup> century.

According to NEP 2020, learning should be holistic, integrated, engaging, and enjoyable. There have been significant structural changes in curriculum and pedagogy in schools, colleges, and universities. The current curriculum places limited focus on developing life skills such as communication, teamwork, and problem solving. These essential skills should be revised to ensure students thrive in real-life situations. The NEP 2020 recognizes the significance of digital skills and aims to integrate technology into the curriculum effectively.

Students will develop digital literacy, adaptability, and technological competency by restructuring pedagogy into digital tools, online resources, and innovative teaching methodologies. The curriculum and pedagogical reforms outlined in NEP 2020 aim to align education with real-world skills, encouraging experiential learning, reducing the burden of syllabus, promoting multidisciplinary education, enhancing digital literacy and technological skills, addressing socio-economic disparities. Government's role in curriculum and pedagogical restructuring is policy implementation and monitoring, teacher training and professional development stakeholder engagement. Implementation of curriculum and pedagogical reforms in schools in India face infrastructural challenges such as proper classrooms, libraries, laboratories, and technology infrastructure. Also face many challenges like resource allocation, evaluation and monitoring, equity and access mindset shift etc. Ultimately, curriculum and pedagogical restructuring will create an education system that nurtures innovation and equips students for a brighter future.

Keywords: Education, Curriculum, Pedagogy, Digital Literacy, Technology

## Poor in Technology can never grow in today's Scenario

### Abstract:-

The rise of digital technologies has impacted all aspects of society, from business to education. To meet the difficulties of the digital transformation, our younger generation's ability to learn and make decisions based on such interpretations is becoming increasingly critical. Therefore, future generations of students will need to be prepared with the required digital skills to meet the challenges of a digital

society. In higher education, digital transformation refers to how digital tools deliver value and drive change. This paper will look at the importance of digital education as a future goal of sustainable educational development. Sustainable development education is one of the key motivators that can aid in achieving the Educational Sustainable Development (ESD) in Sustainable Development Goals (SDGs).

ESD is an interdisciplinary educational strategy that encompasses the formal and informal curricula integrated social, economic, and environmental components. (UNESCO, 2020). The interdisciplinary nature of learning and teaching can strengthen and re-energise knowledge. This could lead to supporting and empowering learners, teachers, administrators, and researchers to understand sustainability issues systemically and globally. Keywords: Digital technologies, digital education, e-learning, IT Infrastructure.

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## Integration of Technology in Education and Learning

Due to the rapid expansion of Information and Communication Technology, learners have become digital learners as a result. Teachers have to incorporate technology innovation into their pedagogical approaches where the attitude, skill, and awareness of the teacher regarding technology are essential to its effective integration. Being an essential part of the present time, ICT significantly influences all domains of human life (Gnambs, 2021). Technology - Any application of scientific knowledge for practical purposes (Hlynka & Jacobsen, 2009). Physical examples of technology are rapidly changing as new advances are made using scientific information and understanding, making a clear, accurate definition difficult to ascertain (Cummings Buzzard, 2002).

Information and Communication Technology (ICT) - Although it can encompass any technological device or development used for gaining information or communicating information with others, it most commonly refers to computers as tools for technology (Tondeur, et. al. 2009).

ICT integration - Effective use of ICT tools to accomplish learning goals. It is a process that involves many diverse factors and changes rapidly with the development of new information and communication technologies (Tondeur, et. al., 2009). The full potential of technology for teaching and learning is yet largely untapped. When adopted properly, technology can assist students in gaining the unnecessary abilities to thrive in an advanced, highly technologically advanced economy. Unexpectedly, educators all throughout the world were urged to switch to online and distance learning during the Corona Pandemic. They made an effort to continue classroom instruction in a face-to-face manner while also integrating it into the technology environment. Thus, Teachers may greatly benefit from the implications of ICT in the classroom.

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## Blended Learning's Effect on Academic Achievement

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### Abstract:-

Blended learning is an innovative approach to incorporating technology into the course of instruction in the classroom. The application of this strategy in scientific classrooms in India has been limited to a small number of instances. It was the goal of the research team that was responsible for this study to investigate the potential impact that a blended learning method may have on classroom performance. This quantitative experimental inquiry was carried out with the participation of eighty undergraduate students from a variety of institutions located in Ranchi town. For example, forty students took part in the regular, in-person class, while the remaining forty students took part in a hybrid class that featured both online and in-person learning.

An investigation of the impact of blended learning was made possible by analysing the results of the achievement exam taken by the students. Following an in-depth analysis of the data, it became clear that the control group and the experimental group had attained dramatically different outcomes on the post-test of their accomplishments. When compared to students who were taught using more traditional methods, the findings showed that students whose sessions incorporated a blended learning component scored much better academically. The use of blended learning is now considered to be one of the most effective educational approaches. According to the findings of the study, blended learning had a favorable impact (both positively and negatively) on learner accomplishment and retention.

Keywords: Technology, Blended learning, Improvement, Environment and Effective

## Blended Learning in Context of Digital Form

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### Abstract:-

India is considered as an under-developed country since, before few decades the most of the activities have been done traditionally. But after the certain duration due to the modern technology transshipment occurs the revolutionary reformation can be observed in approx everywhere. Its various consequences also appear in Education system. The traditional methods of learning were highly influences after the pandemic of corona. However its origin was already appear in certain places. The Blended learning is the outcome of both the traditional and online ways of learning. It resulted as the mixture ways of study in the both contexts. Where the traditional learning provide the platform with the physical participation and appearance of the learners and online for

the only virtual, but the Blended learning is the outgrowth of both the methods. Blended learning is all about outcome and an innovative concept that is provide the both types of learning ways including the support of Information and Communication technology.

Due to the hectic and busy schedule, unemployment, availability of resource materials, poverty and many more snags, the learning highly effected to the learners and the direct interaction cannot be possible. Blended learning provide the virtual platform as well as the face to face interaction for the learners. It creates the students centered platform for the learners. However without the limitations of any learning cannot be possible but it is all about its merits which effect it with the positive aspects.

Keywords: modern technology, pandemic, traditionally, education, ICT, poverty, virtual, Communication, Unemployment, learners, resources, Students centered.

### Digital literacy and skills for online education

Bidyaboti Sahu

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### Abstract:-

Technology today has become a new way of living and is entrenched in every face of modern human life. The internet, mobile phones computers and various other tools of information management have completely changed the way how people live, Learn, interact and work. Youngest today are already exposed to various digital tools and are driving innovation in the technology sector. This has resulted in a mind shift of sorts in the education sector, with more and more institutions around the world realizing the important of adopting technology in the classroom.

Having sound digital literacy skills and having the confidence to grow them is becoming an essential professional skill for all graduates. We need to help students recognise the importance of digital literacy in their lives, their learning and their employability and to encourage them to build the confidence to transfer their skills to multiple contexts. Being digitally literate goes beyond being able to use technology, it is the ability to function critically and effectively in a digitally enhanced environment. Skills such as flexibility, adaptability and being a lifelong learner are essential, essential to maintaining relevant digital literacy skills over time.

We need to encourage students to improve their digital capabilities through ongoing contextualized digital literacy development activities, not as a separate topic or course but integrated into discipline learning.

## Teaching and Learning method for smart Education

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### Abstract:-

Smart education represents a paradigm shift in teaching and learning methods, leveraging advanced technologies to create immersive, interactive, and personalized learning experiences. In today's digital age, where technology permeates every aspect of our lives, smart education offers innovative approaches to engage students, enhance learning outcomes, and prepare them for success in the 21st century. This abstract explores the key components and benefits of smart education, as well as the challenges and considerations in its implementation. Smart education encompasses a diverse range of teaching and learning methods, including but not limited to, flipped classrooms, blended learning, gamification, adaptive learning, and virtual reality (VR) simulations.

These methods leverage technology to cater to diverse learning styles, promote active participation, and foster critical thinking and problem-solving skills among students. By incorporating multimedia elements, interactive exercises, and real-world applications, smart education transforms traditional classrooms into dynamic learning environments that inspire curiosity and creativity.

One of the primary benefits of smart education is its ability to personalize learning experiences. Through adaptive learning platforms and data analytics, educators can tailor educational content to individual students' needs, preferences, and learning trajectories. This personalized approach not only enhances student engagement and motivation but also maximizes learning outcomes by addressing each student's unique strengths and weaknesses. Furthermore, smart education transcends the physical limitations of traditional classrooms, enabling anytime, anywhere learning. With the proliferation of mobile devices and internet connectivity, students can access educational resources and participate in collaborative activities from virtually any location. This flexibility not only accommodates diverse learning styles and schedules but also promotes lifelong learning and professional development.

However, the implementation of smart education is not without challenges. Technical infrastructure, digital literacy, teacher training, and privacy concerns are among the key considerations that must be addressed to ensure equitable access and effective utilization of smart education technologies. Additionally, the rapid pace of technological innovation requires continuous adaptation and updating of educational practices to keep pace with evolving student needs and societal demands.

## Teaching learning method for smart class

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### Abstract:-

In recent years the integration of technology in education has revolutionized traditional teaching methods leading to the emergence of smart classrooms. This research synthesis aim to examine the effectiveness of smart class. Teaching learning methods in enhancing educational pedagogy .Through comprehensive review of existing literature .This study investigates the impact of smart class technologies on student engagement, academic performance and overall learning outcomes. Additionally it explores various instructional strategies and technological tools employed within smart class room such as interactive whiteboard educational apps, virtual reality and collaborative platform, Furthermore this synthesis delves in to the role of educators in the effectively utilizing smart class technologies to facilities personalised learning experience and foster critical thinking skills among students, by synthesizing finding from diverse studies.

This research contributes to a deeper understanding of the potential of smart class teaching learning methods in transforming conventional education paradigm and preparing students for the challenges of the digital age. Furthermore the incorporation, gasification elements incentives students participation and motivation. Transforming the learning process into a dynamic and enjoyable experience. By promoting active learning and collaboration, smart classrooms facilitates the development of essential 21st century skill such as communication creativity and collaboration etc for success. Immerging technologies including artificial intelligence, augmented reality and interactive multimedia are examined for their transformative impact on teaching and learning.

Furthermore the paper underscore the importance of teachers professional development and pedagogical training of effectively integrate technology into instructional practices. By educating current trends and best practices these review provides valuable insight for educators, policy makers and stake holders striving to optimize teaching and learning outcomes in the digital age.

## Technology in Education: - Decrease Paper and Photocopies Casts, Promoting Concept of "Green Revolution"

### Abstract:-

The era of 21<sup>st</sup> century is often regarded as an era of technology. Technology today plays a very important role in our life. It is seen as a basis of growth of an economy. An economy which is poor in technology can never grow in today's scenario. This is because technology makes our work much easier and less time consuming. The impact of technology can be felt in every possible field one such field is education technology is a term that refers to a body of knowledge that is employed to generate tools create skills and choose materials for human use, technology includes the uses of materials tools, techniques, and sources of power to make life easier or more pleasant and work more productive.

Type of technology used in education such as Smart boards, Classrooms pc, Projectors, Television which provides paperless mode of learning that has become great Source for teachers to help students grasp a concept easily The use of scientific knowledge for practical purposes or applications, whether in industry or in our everyday lives. The act or process of imparting or acquiring general knowledge, developing the powers of reasoning, judgment and generally of preparing oneself or others intellectually for mature life.

Thus, we can say any technology, which increases the rate of learning, would enable the teacher to teach less and the learner to learn more. Present education scenario is based on technology thus it has made the learning more-easier, more universal. Resulting in less educational cost, paper savings promoting towards green revolution. Available online study materials, audios, videos in today's era have reduced education cost, paper cost, time saving promoting green revolution as its. Technology cannot replace the human touch in providing education. However, it plays a paramount role in improving performance.

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## Digital literacy and skills for online Education

### Abstract:-

In the contemporary landscape of education, the rapid advancement of technology has revolutionized the way knowledge is acquired and disseminated. With the proliferation of online learning platforms and digital resources, the concept of traditional classrooms is evolving, making digital literacy and skills indispensable for success in education.

Digital literacy encompasses the ability to navigate, comprehend, and utilize information effectively in digital formats. In the context of online education, digital literacy equips learners with the proficiency to access educational resources, engage with multimedia content, and leverage digital tools for academic purposes.

Digital skills encompass a spectrum of proficiencies, including proficiency in using educational platforms, creating digital content, collaborating with peers remotely, and troubleshooting technical issues. Critical thinking and digital citizenship are integral components of digital literacy in online education. With the abundance of information available on the internet, learners must develop the skills to evaluate the credibility, relevance, and accuracy of online sources. Fostering digital citizenship entails promoting ethical behavior, respect for intellectual property, and responsible digital communication within online learning communities.

Time management and self-regulation are also essential facets of digital literacy for online education. Online learning offers flexibility but requires discipline and self-motivation. By cultivating self-regulation, learners can maintain focus, stay organized, and persist in their academic endeavors amidst distractions inherent in the digital realm.

Digital security and privacy are paramount considerations in the digital landscape of online education.

With the increasing prevalence of cyber threats and data breaches, safeguarding personal information and maintaining digital hygiene are imperative for learners engaged in online learning. Adhering to best practices in password management, utilizing secure networks, and exercising caution while sharing sensitive information are essential measures to mitigate risks and protect oneself in the digital domain.

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## Digital Literacy and Skills for Online Education

### Abstract:-

Digital literacy and skills are essential for effective participation in online education. This includes proficiency in using various digital tools such as video conferencing platforms, learning ms, and online research techniques. Additionally, critical thinking skills are crucial for evaluating online sources and discerning reliable information. Time management and self-discipline are also important for staying organized and motivated in a digital learning environment.

We can see how crucial digital literacy has become in today's era and situation, since nowadays students rely on the Internet as a primary source of information, students and teachers are increasingly focused on the benefits of digital literacy skills in schools. Digital literacy is important for students to become a citizen who is able to use technology to interact with the modern era. However, some parents are concerned about the bad effects of digital literacy because it is based on the Internet. They worry about the safety of their children's private data like a phone number and address that might risk bullying or predators. Even with all these concerns, digital literacy brings more benefits as long as we use it for positive change and that is why we need to introduce how to apply digital literacy properly and safely.

Another reason is digital literacy helps students to study faster. Before technology developed as now, getting various kinds of information is still very limited. In the past, teachers used to encourage students to read books with a dictionary right next to them. So, if they find some difficult words, they will easily look up the definition in the dictionary.

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## Teaching and Learning Method for Smart Education

### Abstract:-

Smart education encompasses innovative teaching and learning methods that leverage technology to enhance the educational experience. One effective approach involves personalized learning, where students receive tailored instruction based on their individual needs, interests, and learning styles. This can be achieved through adaptive learning platforms that use algorithms to analyze student performance and deliver customized content and feedback. Another key method is active learning, which encourages students to engage with the material through hands-on activities, discussions, and collaborative projects. This approach fosters critical thinking, problem-solving skills, and deeper understanding by allowing students to apply concepts in real-world contexts.

Incorporating multimedia resources such as videos, simulations, and interactive tutorials can also enhance learning by providing visual and interactive representations of complex concepts. These resources appeal to different learning preferences and help reinforce understanding through multiple modalities. Furthermore, flipped classrooms flip the traditional model of instruction by having students engage with lecture materials outside of class and use class time for discussion, problem-solving, and application. This approach promotes student-centered learning and allows teachers to provide more personalized support and feedback. Peer learning is another effective method where students collaborate with their peers to discuss concepts, solve problems, and provide feedback. This encourages active engagement, improves communication skills, and fosters a sense of community and cooperation among students.

Integrates game elements such as points, badges, and leader boards into educational activities to motivate students and make learning more enjoyable. Game field learning environments can increase student engagement, persistence, and motivation by providing clear goals, feedback, and rewards.

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### Universal Design for learning (Digital inclusion and accessibility)

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### Abstract:-

Universal Design for Learning (UDL), a framework for designing instruction that addresses a wide range of learner differences is being used in inclusive classrooms based on today's changing environment. It was effectively implemented to broaden the reach, understanding

and engagement of people through digital education. And while learning media literacy is a major challenge for all, UDL supports creative learning principles. UDL strategies and methods encourage the development of expert learners, although they can also be used for personal engagement and inspiration.

As a result, instruction in diverse, multiple and accessible learning opportunities embraces student diversity. Providing the principles and guidelines of UDL as well as ensuring that teachers in digital and media literacy areas will benefit from their work, Disability is also a factor in engaging a wider range of learners, including those with learning challenges.

Keywords: - universal design for learning, access, accessibility, Technology, Digital Literacy, Media Literacy

## Technology in Education:- Decrease Paper and Photocopies Costs, Promoting Concept of “Green Revolution”.

### Abstract:-

Technology in education have play a vital role, Integrating technology into education not only revolutionizes the learning process but also aligns with the principles of sustainability, notably reducing paper consumption and promoting eco-friendly practices. One of the most significant ways technology achieves this is by diminishing the reliance on paper photocopies, thereby cutting costs and advancing the ideals of the green revolution.

In traditional educational settings, photocopying handouts, assignments, and exams entails substantial paper usage, contributing to deforestation and environmental degradation. However, with the advent of digital platforms, educators can distribute materials electronically, eliminating the need for excessive printing. Digital textbooks and e-resources offer a sustainable alternative to traditional printed materials.

Students can access a wealth of information on electronic devices such as tablets or laptops, reducing the demand for paper-based textbook sand supplementary reading materials. This not only conserves natural resources but also reduces the carbon footprint associated with publishing and transporting physical books.

Technology promotes interactive and multimedia-rich learning experiences, which are often more engaging and effective than traditional methods. Virtual simulations, educational games, and multimedia presentations not only reduce the need for paper but also enhance comprehension and retention rates among students. By embracing technology in education, institutions not only save costs on paper photocopies but also cultivate a culture of environmental awareness and responsibility among students and educators. Through digital innovation, schools can lead by example in promoting sustainability practices, contributing to the broader green revolution aimed at conserving resources and preserving the

planet for future generations.

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## Training Teachers for Digital Literacy on the Context of Teacher Professional Development

### Abstract :-

In today's rapidly evolving technological landscape, preparing educators to integrate technology effectively into teaching practices and empower students for success in the digital age is paramount. This involves equipping teachers with the skills and resources to foster digital literacy among their students, encompassing communication, collaboration, critical thinking, and problem-solving with digital tools. Effective teacher training must be ongoing, comprehensive, and tailored to individual needs and contexts. It should focus not only on introducing new technologies but also on leveraging them for innovation and personalized learning experiences.

Key components of effective professional development include hands-on workshops, collaborative learning communities, mentoring, online resources, and reflective practice. Hands-on workshops provide practical experience in using digital tools, while collaborative learning communities facilitate idea sharing and best practice dissemination. Mentoring and coaching offer personalized support to navigate technology integration challenges, and online resources provide flexible learning opportunities.

Furthermore, professional development initiatives should be grounded in research-based practices and aligned with relevant standards, such as ISTE Standards for Educators or UNESCO Digital Competency Framework for Teachers. These standards guide the development of key competencies necessary for effective technology integration and digital literacy promotion. By aligning with these standards, educators can ensure their efforts are impactful and relevant.

In conclusion, effective teacher professional development in digital literacy is crucial for preparing educators to meet the needs of 21st-century learners. Through comprehensive, ongoing training that emphasizes practical experience, collaboration, mentoring, and alignment with standards, educators can empower teachers to cultivate digital literacy among students and prepare them for success in an increasingly digital world. This concerted effort ensures equitable access to high-quality education and fosters student success in the digital age.

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## Use of Digital Technology in Library Education for sustainable Development

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### Abstract:-

Digital technology now incorporated into organizations for effective and efficient operations of their job performance. Many Asian countries are still yet to advance in the technology stage while others parts of the world are already adopting digital technologies in their operations and service delivery.

A qualitative research approach was applied in this study using a literature review to draw various findings in the online databases of Scopus and Web of Science articles. The findings indicate that digital technologies have been used effectively to sustain academic learning in libraries, to deliver information in various formats to library users for their information needs, processing, storage, manipulation, presentation and communication etc. Digital technologies such as smartphones, eBooks, blogs, social media, computers, scanning machines, digital cameras, robotics, drones etc. were used to support the library and information services.

Two decades ago, an academic library served merely as a quiet study space and a huge repository of tangible materials such as books, journals, and reports, among other things, that could be collected, issued, returned or studied. Due to the changes brought by digital technologies into the library space, individual users have infused it into their work routines for effective and efficient operations on daily basis in their activities.

Digital technology has entered into our daily lives and has become an unavoidable part of our life. The impact of technology advancements on all aspects of the academic library activity, including systems, services, collections, the physical library environment, marketing, and support for university teaching, learning, research, and administration, has become highly significant. In COVID-19 pandemic and its mitigating effects resulting in diminished human contact and remote engagement, academic libraries can ride the wave of new norms like virtual and open distance learning by, employing digital technologies to turn a difficult circumstance into an opportunity.

**Key Words:** - Digital technology, Qualitative Research, academic learning, eBooks, blogs, social media, computers, scanning machines, digital cameras, robotics, drones. Journals, physical library, COVID-19 pandemic.

## **Smart class: an innovative approach to Teaching and Learning**

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### **Abstract:-**

Smart Teaching, Smart Learning, Smart School, and Smart strategy are the four elements of advanced education. The development of a society and a country education can only be effective if these four elements are correctly determined, implemented, and reflected.

Smart classrooms empower classrooms with digital hardware such as computers, projectors, and interactive whiteboards. Having the teachers use them to replace “offline” or paper-pen learning will not be sufficient. While using engaging presentations and embedding multimedia is a step above reading from the static text, it is, indeed, just the first step in distinguishing a traditional classroom from a smart one.

Keyword: smart class, teacher, teaching, learning



विद्वत्त्वं च नृपत्वं च,  
नैव तुल्यं कदाचन ।  
स्वदेशे पूज्यते राजा,  
विद्वान् सर्वत्र पूज्यते ॥



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