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Innovation In Education , Science, Industry And Technology

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Abstract-

One crucial and essential component of society that controls how society functions is education and science as well . It strikes a deep chord with each society's desires and aspirations. Because of this, education cannot be immune to societal changes that occurs all around us. Therefore, each technological development has an effect on the way that education is conducted in the modern world, either directly or indirectly.Educational Technology (ET) is the effective organization of any learning system adopting or adapting itself to techniques, procedures, and products to serve identified educational goals. This entails careful identification of the aims of education, understanding of the diversity of learners' requirements, the settings in which learning will take place, and the breadth of supplies needed for each of them.

Objectives-

- You will be able to: Talk about what innovation means after completing this course. Examine the obstacles pertaining to innovation.
- ToDescribe the function of the innovative educational strategy. Explain how the Science and technology is helpful for the sustainable development for the nation.
- To understand the role of education and science to innovate a Viksit Bharat 2.0
- To understand the meaning of sustainable development in the filed of education and technologies.

Methodology:-The study's foundation is secondary data gathered from the Ministry of MSMEs' annual report, newspaper articles, news, website, and published data. Both conceptual and empirical studies have been examined.

Key Findings:-Well we will discuss theprocess of making modifications to something that already exists is known as innovation. Both drastic and gradual changes are possible. In the sphere of education, innovation is essential to preparing students to meet the ever-evolving global demands. It equips the pupils to adapt to a world that is competitive.It is crucial that education be delivered in a novel way, and this can only be accomplished by innovation. Innovation needs to be implemented in a way that makes education more affordable and accessible. and produce excellent outcomes.
The significance and meaning of innovation have been examined in this unit.
The unit will also discuss the barriers related to innovation and the introduction of instructional media approaches in the field of education. The unit will also highlight the types of teaching aids and steps involved in the instructional media approach.

Key words:-Innovation, Education, Sustainable Development, Digital Transformation, Transactions, Technology.

Introduction:-

Word innovation, The process of making modifications to something that already exists is known as innovation. Both drastic and gradual changes are possible. In the sphere of education, innovation is essential to preparing students to meet the ever-evolving global demands. It equips kids to adapt to a world that is competitive.

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The significance and meaning of innovation have been examined in this unit.
In addition, the course will cover the obstacles to innovation and the integration of science, industry, and technology in the classroom.One of the key tools for successfully understanding culture and customs is education. Its primary goal is to instill in them the traditions that are a part of our culture. Education and culture are interdependent. each other, as teaching the importance of social and cultural history is one of education's primary goals.

Research Methodology

Description of Research Design:-Designing suitable systems that will support and facilitate suitable teaching-learning systems that might achieve the stated objectives is the difficult part. Understanding the function of educational technology as a change agent in the classroom—which encompasses not just the instructor and the teaching-learning process but also systemic concerns like reach, equality, and quality—is essential to overcoming this difficulty.This series concentrates on in-depth discussion of subjects linked to our shared objective: worldwide advancement in scientific education, given how quickly technology is developing and affecting both our comprehension of science and the process of teaching it. Researchers, academics, instructors, students, and educational technologists write each research-based book. Their varied breadth and substance reflect the need for more interdisciplinary and multidisciplinary methods to enhance teaching, policy, and practice as well as to understand how technologies are used and how they might benefit everyone on a global scale.

Innovation in Education For a Future Ready India:-

In every country, the existence and well-being of the requirements of society depend on the educational system as a social institution. In addition to being comprehensive, reasonably priced, and of high quality, education should also be evolving constantly to meet the needs of a rapidly changing and unstable globalized world. . The concept and practice of teaching and learning must be improved by lecturers, educators, researchers, administrators, and legislators. Innovation in education is essential to improving education, according to the OECD (2016). Innovation will boost the country's productivity as well as the quality and equality of education. The OECD (2016) states that the primary issues facing education today are its efficiency and productivity.

An other way to define innovation in education is as a notion. These academics believe that innovation is a notion that links future economy and society. It is a strategy for determining the best alternate strategies for altering a person's behavior when the current strategies—such as learning theories, learning activities, teaching techniques, and learning approaches—are not functioning well.

Technology and Innovation is mostly driven by technology Numerous papers addressed innovation from a technological perspective. According to Findikoglu and Ilhan (2016), innovation does not always entail using the newest technological advancements. They contend that innovation and technology adoption are two distinct but synonymous concepts.The document discusses issues with India's current education system and envisions a future system. The traditional system is classroom-oriented with one teacher for many students and only one-sided conversation. It is local with poor student performance and teacher quality. The future system envisions serving locally but training globally using quality materials and information technology. Students could have an online global campus. The future aims to reduce inequalities through greater investments in public and private education that encourages innovation, creativity and entrepreneurship.

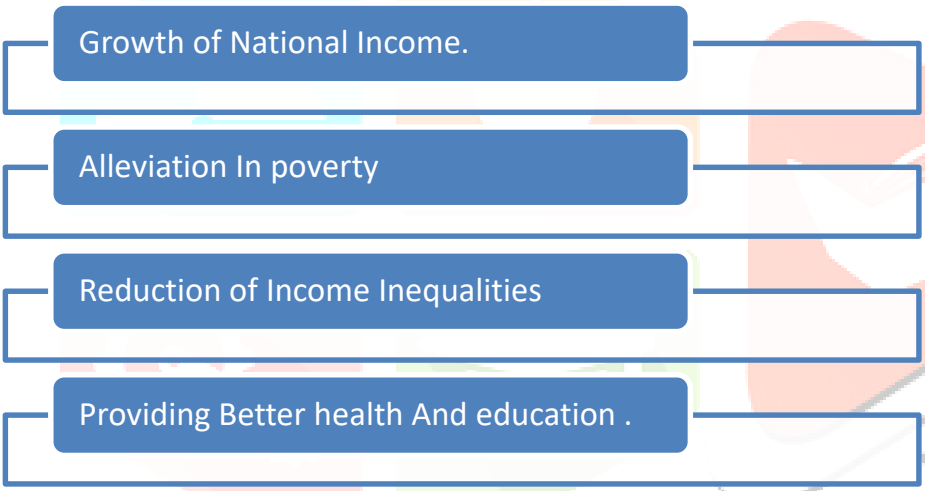
Science, Technology and Innovation Policy are As The Pillar Of Sustainable Development:-

The main forces behind both economic expansion and human advancement are science, technology, and innovation, or STI. India must advance along a sustainable development path that encompasses social inclusion, economic growth, and environmental sustainability for accomplishing "Atmanirbhar Bharat". Through short-, medium-, and long-term mission mode initiatives, the new Science, Technology, and Innovation Policy seeks to create a nurturing ecosystem that encourages research and innovation from individuals and organizations. Through processes of skill development, training, and infrastructure development, strategies to enhance STI education will be established, making it inclusive at all levels and more linked to the economy and society.

In order to fulfill the overarching objective of "Atmanirbhar Bharat," the strategy would encourage technological independence and indigenization. We shall embrace and concentrate on a two-pronged strategy of both indigenous technology development and technology indigenization. in accordance with national resources and goals, such as sustainability and social benefit. Indian Government started to provide the benefits for the researchers publishers students etc are some as follows in the name of innovative education:-

Industrial Transformation:-

India was among the first countries in the Third World to industrialize, thanks to a sophisticated infrastructure that was established during British rule and included irrigation, railroads, and all-weather highways. Clearly, Indian industries represented the comparative advantage of India. India had some of the finest manufacturing exports and industrial performance in the world.The first successful modern cotton textile mill was established in Mumbai in 1854, marking the beginning of India's industrial growth. The industry has grown astronomically since then. Between 1952 and 1782, the number of mills rose from 378. In India, the degree of industrial development varies by area. In certain places, Indian companies have gathered in clusters. The majority of India's industrial areas have grown up in the hinterlands of some of the country's largest ports, such as Mumbai and Kolkata. Chennai as well.Raw resources, energy, finance, and markets are all readily available in these industrial areas.by March 1998. Cotton textiles have a significant role in the national economy. Many individuals are given work chances by it. Approximately 25% of all industrial labor is employed in this sector.



According to the World Bank, "**it is through rapid growth that India will be able to reduce poverty and generate the resources to invest in the health and education of its people who will in turn sustain this growth, [as] overall growth accounted for the lion's share of poverty reduction: 80% of the decline in the number of households below the poverty line between 1951 and 1970, and almost 100% since 1970**".

India's Digital Transformation:-

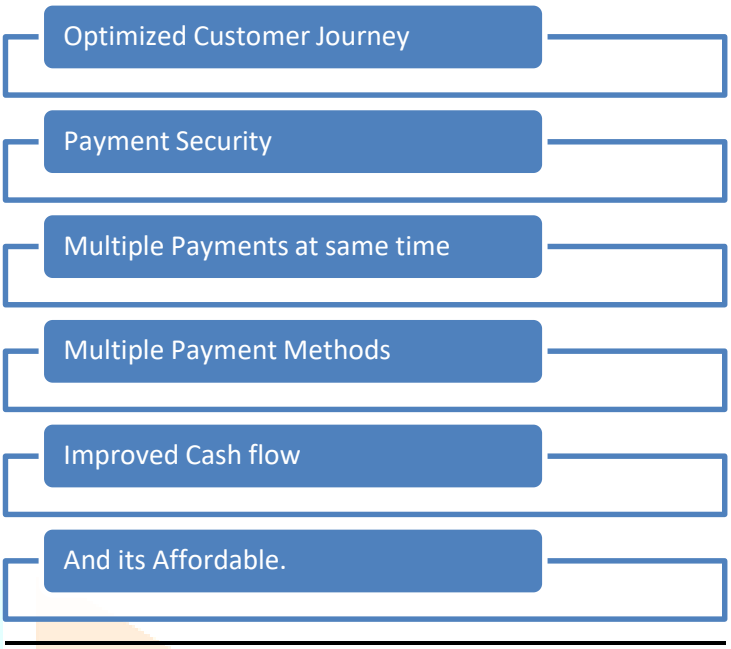
"**In the Amrit Period of Independence, we are marching ahead rapidly to create a transparent system, efficient process and smooth governance to make development all-round and allinclusive. The Government is committed to strengthening good governance, that is pro-people, and proactive governance. Guided by the 'citizen-first' approach, we remain untiring in our efforts to**

further deepen the outreach of our service delivery mechanisms and make them more effective." – Prime Minister NarendraModi

1. "**Maximum Governance – Minimum Government**" has been the government's guiding principle. Millions of Indians profit from India's successful conversion of technologically antiquated institutions into cutting-edge digital institutions. By using digital technology to pursue Next Generation Administrative Reforms with the strategic goal of "Maximum 0Governance – Minimum Government," the focus of administrative reforms has been on bringing the government and citizens closer together. The citizen serves as the focal point of The defining objective is the civil servant's journey and dedication to the greater public good in the face of adversity.
2. **eLearning,** often known as digital learning, is the delivery of instructional materials and learning opportunities via electronic means. Digital tools including computers, laptops, tablets, and smartphones are used in this kind of education.
3. **Learning Management Systems (LMS):** An LMS is a piece of software that facilitates the delivery of online or e-learning. By setting up the online classroom, developing courses, exchanging information, facilitating real-time communication and teamwork, sharing assignments, offering tests, and doing data analysis, it supports educators and learners.
4. **Open Educational materials (OERs) and FOSS:** OERs are publicly accessible and available materials. These sites make it possible to obtain excellent instructional materials without having to pay for them.
5. **MOOCs**: Massive Open Online Courses (MOOCS) are another example of the education sector's recent surge . These online courses are meant to encourage remote and open learning. And many more materials like them the government has been provided for the digital transformation for the innovative
   nation

The Digital Transaction:-Digital transactions are those where the money moves straight from one account to another and the consumer gives permission for the money to be transferred electronically.

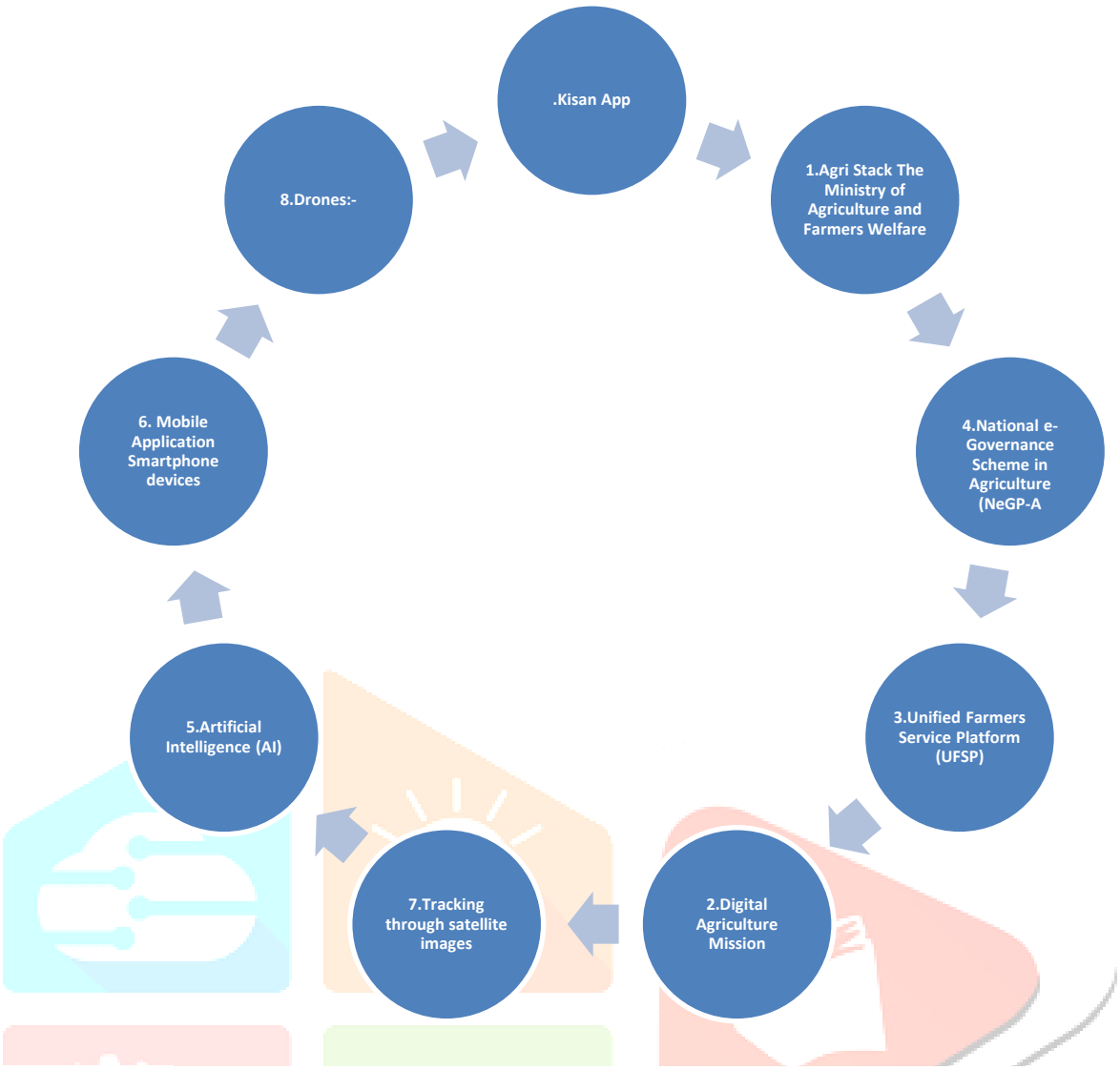
Advantage of Digital Transactions :-



Technological innovations in Agriculture :-

The culinary tale of India's Atmanirbharta begins over fifty years ago. India was forced to import food grains in 1950–51 due to a food crisis brought on by sporadic famines and droughts. Agriculture was under increasing strain due to a fast expanding population, and food production and productivity were not keeping up. The fact that 50% of the GDP came from the farm sector even at this time demonstrated how reliant on agriculture our economy was. Over the past few decades, India has become self-sufficient in food grain production, which is a huge accomplishment for both our agricultural sector and the economy as a whole. India is now the world's greatest producer of sugar and, behind China, the world's second-largest producer of rice. With about 14.14 percent of the global wheat production in 2020, India is also the world's second-largest producer. India is also slowly becoming self-sufficient in the production of pulses. The country is expected to produce 315.72 million tons of food grains, which is 4.98 million tones more than the amount produced in 2020–21, according to the 4th Advance Estimates.

The all technology are seems to be helpful in the field of agriculture . The government launched many facilities in the field of food and agriculture some of them are given below :- (With the help the following charts) -



Data Collection:-Data Collection: secondary data are collected from Journals, the Internet, and Magazines, annual report Will be used for this study.

Results And Findings:- In order to support the launch of digital India and the contribution of Atmanirbhar Bharat to MSME and SME, this study examines innovation in a variety of avenues towards Viksit Bharat through numerous schemes like LMS, OERs, FOSS, MOOCs, E-Learning, M G-M G, etc. It also highlighted the significance of ONDC, OCEN, and NDEA in boosting productivity, and the seamless operation of e-commerce, as well as in generating employment opportunities and functions that boost the nation's economy.

In the journey of innovation in education I have found that we got increasing literacy rates day by day as well as in the urban and rural areas also .

Table:-1

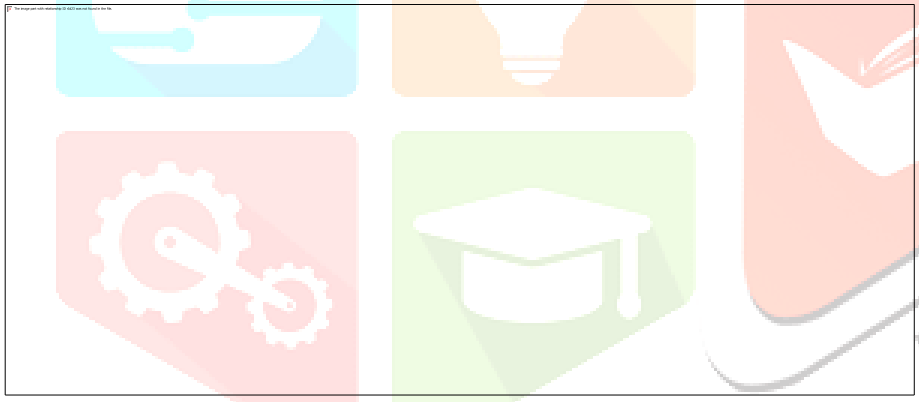
Class	Government Schools		Private Schools	
	Girls	Boys	Girls	Boys
1-4	50.65	48.5	44.65	56.3
5-8	51.29	47.9	45.7	56.39
9-12	51.04	49.25	45.65	57.65

Table – 2

Attendance Ratio-

Social Groups	Male	Female
SC	20.6	16.4
ST	12.7	8.5
OBC	26.4	19.5
Others	29.4	24.3

Table:-3



According to the Report of RBI Reserve Bank Of India , the survey shows that online transaction rates are increased year wise . we can understand the growth of the usage of digital payments in India .

Table-4

Use of E-learning as per the Choice Of Students and Teachers as well:-

Sr. No.	Use	Percentile
1.	**Full use of e-learning**	**11% Teachers**
2.	**Use offline platforms for teaching and learning**	**20% Teachers**
3.	**Use both online and offline platforms**	**57% teachers**
4.	**Do not use any platforms for teaching and learning**	**6% teachers**

Table 5

Sr. No.	Use	Percentile
1.	**Full use of e-learning**	**33% of Students**
2.	**Use offline platforms for learning**	**16% of Students**
3.	**Use both online and offline platforms**	**36% of students**
4.	**Do not use any platforms for learning**	**25% Students**

Conclusion:-The investigation demonstrated how digitalization has affectedthe Indian economy. It has not been demonstrated that when people connect to broadband, the unemployment rate increases. Using a smartphone affects digital transactions and increases the transparency and accountability of the financial system. .During the pandemic, when everyone was having difficulties in the education sector, people had completely embraced the digital developments and let go of their preconceived ideas about them. The education industry may undergo several revolutionary changes as a result of this upheaval.We stress again how important financial literacy is and how it may change the trajectory of growth in poor countries like India. For this program to be successful, each component must get constant, focused attention. All of us must be prepared to take on the difficulties involved in putting this strategy into effect and psychologically prepare for the impending changes. This is the only way we can make this vision a reality.Only when innovations in education are broadly embraced by communities, educators, administrators, students, and other stakeholders can they truly revolutionize the educational system. The introduction of the invention must have accomplished its goals or had a major effect on the educational system. It is used for a variety of different advancements in addition to those related to educational technology. Innovation has a significant influence on the promise of a better, more advanced educational system for a brighter future. Several nations, like Finland, Singapore, China, and Hong Kong, have made innovation their central change and have been successful in raising student performance. But in the early stages of deployment, they encountered several difficulties.

In conclusion, we can state that digitalization and other revolutionary educational breakthroughs will help to develop and educate future generations of young people who can readily adjust to any social, political, or economic shift. All educational levels must adopt innovations proportionately in order to create a logical connection in the way students learn certain talents.

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