Need for Digital Upskilling of Workforce

This editorial is based on "**A Digitally Unprepared Workforce**" which was published in The Hindu BusinessLine on 02/05/2023. It talks about the World Economic Forum that projects the creation of jobs mainly on the basis of tech-advancements and how India will be a laggard in the same if digital skilling, upskilling and reskilling is not given sufficient impetus.

For Prelims: NSS 2020-21**,** LFPS 2020-21, **AI**, Machine Learning, **PMKVY, PMKVY 4.0**, **Digital Literacy**, **World Economic Forum** - Future of Jobs report 2023

For Mains: Digital Literacy, Need to enhance Digital Skills and related Initiatives, Issues related to enhancing Digital Skills

With the acceleration in the pace of technological change and the demands for such skills exceeding their supply, digital literacy and upskilling **is not anymore optional and rather a necessity.** The **National Sample Survey (NSS) (2020-21)** and **LFPS 2020-21** indicate the need to broaden the coverage of IT or computer-based training across various sectors.

So does the **Future of Jobs 2023 report** (4th edition; first launched in 2016) released recently by the **World Economic Forum (WEF)** which highlights the **creation of 97 million new jobs by 2025** on account of **technological advancements in artificial intelligence (AI) and other fields.**

Notwithstanding the **initiatives for digital literacy**, India still has a long way to go before it **comes at par with the countries with highly skilled workforce.**

There is an urgent need for the Indian government, businesses, and educational institutions to **invest in digital upskilling initiatives to bridge the** existing digital gap **and remain competitive and relevant in the global marketplace.**

What does the WEF Report say about Tech-Advancement and Job Creation?

- **Optimistic yet Cautionary Projection:** The WEF predicts that while **85 million jobs will become obsolete by 2025**, technological advancements in AI and other fields will lead to the **creation of 97 million new jobs.**
    - However, the **role of machines in the division of labour will continue to increase,** especially for repetitive and routine tasks.
    - The jobs of the future are expected to **rely more on data-driven and machine-powered processes.**
- **Tech-driven Shift in India:** The WEF has also projected a **slightly lower churn in jobs for the labour markets in India** over the next 5 years compared to the **global average of 23%.** The churn in India will largely be technology-driven, via sectors such as **AI & ML (machine learning)**

(38%), followed by **data analysts and scientists (33%) and data entry clerks (32%).**
    - The **smallest churn, predictably, will be in labour-intensive segments** of the economy.
    - However, the report also shows employers in **India and China to remain the most upbeat in terms of future talent availability.**

What Factors Indicate that India's Workforce is Digitally Unprepared?

- **Huge Demand-Supply Gap:** As per a report by **Nasscom**, Draup, and Salesforce, even when taking into account the current talent base of 420,000, there exists a **51% gap between AI & ML and big data analytics' (BDA)** talent demand and supply.
    - This gap is **significantly worse for ML engineers, data scientists, DevOps engineers and data architects** where the demand-supply gap is **60-73%.**
- **Shortcomings in Upskilling:** The problem is exacerbated by the quality of talent available; an **overwhelming number of engineering graduates are unemployable** with their current level of skills.
    - Approximately **30% of the trained workforce in different fields have IT training,** yet **29% of individuals with such training are unemployed,** pointing towards either inadequate training content or poor training quality that results in low employability.
    - Apart from the IT sector, the overall skilling effort, across segments of the economy, falls far short of what is required.
        - For instance, just **22% of those certified under the** Pradhan Mantri Kaushal Vikas Yojana **have found placement.**
- **Lack of Basic Understanding of Computers:** The NSS 2020-21 reveals **about 42% of the country's youth** has a basic understanding of **copying or moving files or using copy and paste tools on a computer.**
    - Additionally, only **10% and 8.6%** of youth have knowledge of **basic arithmetic formulae in a spreadsheet** and **creating an electronic presentation using presentation software,** respectively. Only 2.4% of youth have programming skills.
- **Low Investments:** India's **investment in mid-career upskilling also remains quite average** which has been reflected in the high unemployment rate among those with advanced education.

What are the Initiatives of the Government of India in this Context?

- **National Digital Literacy Mission**
- **PM Kaushal Vikas Yojana (4.0)**
- **Digital India Mission**
- **National Education Policy 2020**
- **DigiSaksham initiative**
- **YuWaah Platform**
- **IndiaSkills 2021**
- **Recognition of Prior Learning**
- **Scheme for Higher Education Youth in Apprenticeship and Skills (SHREYAS)**
- **National Educational Alliance for Technology (NEAT 3.0)**

How can India Make its Workforce Digitally Prepared?

- **Revamping Skills and Investments:** To adapt to the changing job market, it is crucial to **restructure the entire skill development system** and focus on upskilling the workforce with an **eye on emerging technologies and the future of work.**
    - India has an advantage over other countries due to its **sizable working-age population** and a significant youth demographic.
    - However, full benefits of demography can't be reaped if sufficient attention is not given to **strategic investment, particularly in the reskilling of the workforce** to keep up with the digital transformation.
- **Special Focus on IT Skills:** To remain competitive in the global market, it has become

increasingly **imperative for individuals from all sectors to possess specialised IT or computer skills.**
    - The government, recognising this, has implemented several skilling programmes, such as the **Skill India Mission** and **Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 4.0.**
        - These initiatives aim to **train and certify millions of individuals in various vocational skills, including IT and digital skills,** with a focus on emerging technologies like artificial intelligence, mechatronics and robotics.
- **Alternate Talent Pools:** We need to build **digital capabilities in smaller towns**, get **more women to join the work-stream** with hybrid work norms, **revamp vocational education** from industrial training institutes and polytechnics.
    - **Corporate-Social-Responsibility (CSR) funding** from industries can be leveraged for these programmes.
    - The governments should **work together with employers, training providers, and workers** to meet the growing digital learning needs.

Drishti Mains Question:

India has a great opportunity to realize its demographic dividend, however, it is important to prioritise a strong skilling and upskilling strategy specially in the field of technology. Comment.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims:

Q1. To obtain full benefits of demographic dividend, what should India do? (2013)

(a) Promoting skill development
(b) Introducing more social security schemes
(c) Reducing infant mortality rate
(d) Privatisation of higher education

Ans: (a)

Q2. With reference to Pradhan Mantri Kaushal Vikas Yojana, consider the following statements: (2018)

1. It is the flagship scheme of the Ministry of Labour and Employment.
2. It, among other things, will also impart training in soft skills, entrepreneurship, financial and digital literacy.
3. It aims to align the competencies of the unregulated workforce of the country to the National Skill Qualification Framework.

Which of the statements given above is/are correct?

(a) 1 and 3 only
(b) 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

Ans: (c)

Q3. With reference to 'National Skills Qualification Framework (NSQF)', which of the statements given below is/are correct? (2017)

1. Under NSQF, a learner can acquire the certification for competency only through formal learning.
2. An outcome expected from the implementation of NSQF is the mobility between vocational and

general education.

Select the correct answer using the code given below:

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans: (b)

Q4. 'Recognition of Prior Learning Scheme' is sometimes mentioned in the news with reference to (2017)

(a) Certifying the skills acquired by construction workers through traditional channels.
(b) Enrolling the persons in Universities for distance learning programmes.
(c) Reserving some skilled jobs to rural and urban poor in some public sector undertakings.
(d) Certifying the skills acquired by trainees under the National Skill Development Programme.

Ans: (a)

Mains:

Q. Has digital illiteracy, particularly in rural areas, coupled with lack ofInformation and Communication Technology (ICT) accessibility hindered socio-economic development? Examine with justification. **(2021)**

Q. "Demographic Dividend in India will remain only theoretical unless our manpower becomes more educated, aware, skilled and creative." What measures have been taken by the government to enhance the capacity of our population to be more productive and employable? **(2016)**