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EDUCATION AND SKILL DEVELOPMENT IN THE DIGITAL AGE: IMPLICATIONS FOR THE INDIAN WORKFORCE

Dr. SONAKSHI GOYAL
Assistant Professor, Department of Commerce, SVKM's Mithibai College of Arts, Chauhan Institure of Sciences & Amrutben Jivanlal College of Commerce & Economics, Empowered Autonomous, Bhaktivedanta Swami Marg, V.L. Mehta Road, Vile Parle (W), Mumbai.

Dr. KUSUMLATA JAIN*
Associate Professor & Deputy Director (Academics), Department of Computer and Communication Engineering, Manipal University Jaipur, Jaipur-Ajmer Express Highway, Dehmi Kalan, Near GVK Toll Plaza, Jaipur, Rajasthan. *Corresponding Author Email: kusumlata.jain@jaipur.manipal.edu

Abstract

The current research aims to explore the multifold implications of the digital age on skill development and education in India by focusing on the changing requirement of the workforce. The current study undertakes the acute issue that how nation's education and skill development initiatives and policies must develop to orient its workforce with the required competencies to survive in digital era. Strategic challenges include traditional focus on rote learning, discrepancies in technology accessibility, and a vigorous job market that requires continuous upskilling. The study is descriptive in nature. Secondary resources are used to conduct the study undertaken. It includes various research papers, journals, articles and publications of government research papers. The study undertaken provides insight into the juncture of skill development, education, digital era by primarily focusing on the evolving workforce of the country. It has been explored that the Digital India Programme and the National Skill Development Mission have played a very pivotal role with reference to changing needs of the Indian workforce. The current study strongly advocates that the initiatives and policies that focus on quality education and skill development play a crucial role in developing an inclusive society.

Keywords: Digital India Programme, National Skill Development Mission, Vocational Skills, Digital Literacy.

INTRODUCTION

The digital revolution has significantly changed societies and economies across the globe. Due to this, the demands positioned on skill development and education have also transformed considerable shifts in order to maintain pace with the digital age. Nevertheless, India surfaces exclusive challenges in meeting the complete potential of its demographic dividend.

The current digital era requires workforce with varied skill set that does not only include technical proficiency but also adaptability, problem solving and critical thinking. In order to ensure equal opportunity and inclusivity in the digital era, bridging of digital gap is crucial for the nation. Government policies and initiatives have played pivotal role in determining the nation's approach to skill development and education. Programs such as Digital India and National Skill Development Mission have been promoted to enrich digital literacy and skill training throughout the country.

The current research aims to explore the multifold implications of the digital age on skill development and education in India by focusing on the changing requirement of the

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workforce. By exploring current challenges, historical trends and policy interventions, the study aims to provide understanding into the strategies needed to equip the workforce of India with the mandatory skills to survive in the digital age.

LITERATURE REVIEW

Rao, et al. (2024) explored the importance of vocational educational and training in India comprehensively. The study focused on the latest measures taken by the government of India to enhance the skill development in order to improvise the employability aspects amongst the population. Deep literature review and statistics has been used to understand the results on employability with government regulations and allocation of increasing financial resources to the government programs. Survey was conducted on a sample for 23 states taken by the official website of the Ministry of Labour and Employment. Five different questionnaires were used for the primary study undertaken which helps to derive significant results.

The National Education Policy 2020 proposed by the government of India provides an inclusive strategy for evolving the education in the country. The primary objective is to give learners the skills and knowledge required for the contemporary era. It emphasizes on multi-disciplinary approach to impart education in order to promote creativity, problem solving and critical thinking skills amongst the learners. Vocational education and training has been prioritized under NEP as it emphasizes on skill development so that the employment gap can be reduced. Modifications of the assessment procedures has been suggested under the policy to make a transit from rote learning towards a structure which is based on competency. (Kurien & Chandramana, 2020).

Anusree & Gangadharan. (2022) studied the advancements in technology such as artificial intelligence and automation have changed the way work is being done. It emphasizes on the need for up skilling and re skilling the workforce so that the ever-changing demands of the labor market can be met. It has been suggested to offer courses that enhance employment amongst the graduates in the country. It provides insight about ever changing employment market in the country in the light of advanced technology and globalization. The study offers policy recommendations to address the opportunities and bottlenecks created due to the new developments in the country.

Statement of the Problem

The speedy technology advancement pertaining to digitalization across the globe demands for a paradigm shift in world economies. It demands for a labor force equipped with adaptable and diverse skill set. India, as a country has lot of youth as employable workforce which makes it stand at the vanguard of the transformation. However, the present state of skill development and education in the country would not be sufficiently allied with the changing requirements of the digital space. The current study undertakes the acute issue that how nation’s education and skill development initiatives and policies must develop to orient its workforce with the required competencies to survive in digital

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era. Strategic challenges include traditional focus on rote learning, discrepancies in technology accessibility, and a vigorous job market that requires continuous upskilling.

Objectives of the Study

To analyze current level of skill development and education in India by emphasizing on the digital age.

To examine the effect of technological advancements on the requirement of skills of Indian workforce and ascertain the proficiencies and key competencies essential to ensure success in the current digital era.

To explore the scope of digital literacy and availability of technology to several demographics across the country, including rural-urban differences and socio-economic factors.

To evaluate the effectiveness of current initiatives and policies, like the Digital India Programme and National Skill Development Mission to understand the ever-changing requirements of the Indian workforce.

RESEARCH METHODOLOGY

The current research is descriptive in nature. Secondary resources are used to conduct the study undertaken. It includes various research papers, journals, articles and publications of government research papers by the Government of Public reports, India.

Present Status quo of Education and Skill Development in India

India has made remarkable progress in digital literacy, compelled by government initiatives such as Digital India. However, economically deprived population and rural areas still face challenges and differences can be seen with reference to access to technology.

1. Quality of Education: Insufficient infrastructure available for digital learning and out-of-date curriculum has been identified as major problems in educational institutions and schools. It poses a significant challenge to prepare the students for job market which is digitally driven. Although, with coming up of initiatives like Digital India significant changes gas been observed in the country. (Chourasiya & Saini, 2023).
2. Skill Development Programs: Various schemes and initiatives has helped the country to focus on skill development such as the National Skill Development Corporation (NSDC) and the Pradhan Mantri Kaushal Vikas Yojana. It has helped to bridge the gap between practical skills required to perform job and formal education. (Chourasiya & Saini, 2023).
3. STEM Education: Science, Technology, Engineering and Mathematics (STEM) education has acquired lot of importance in recent times. Initiatives such as Atal Tinkering Labs promote problem solving abilities and innovation amongst students, which prepares the learners for the digital world. (Zeeshan, et al., 2021).

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4. Vocational Training: Directorate General of Training, as a part of Ministry of Skill Development and Entrepreneurship offers several vocational training programs. Focus on practical skills and capabilities helps in preparing the workforce with the changing times. (Kumar, Mandava & Gopanapalli, 2019).
5. Industry-Academia Collaboration: It has been observed that there has been a huge gap between the skills required to perform jobs and the curriculum and skills taught by the educational institutions. But, over the period of time, business organizations have been involved in designing the curriculum and offer internships to the learners. It ensures that the graduates are prepared with real-world and hands on experience and skills.

Effect of Technology on Skill Requirements for the workforce in India

1. Increase in Technical Skills: With increasing digitalization in the industries, demand pertaining to technical skills like data analysis, programming, usage of digital tools has increased correspondingly. It can be specially in the sectors such as software development, IT and data science. Also, lot of emphasis has been made on programming languages such as Java, Python with increasing jobs in software industries. (Ra, et al., 2019)
2. Increasing requisite of Digital Literacy: Job market now no needs workforce equipped with basic computer literacy. Knowledge and skills to operate various digital tools, internet navigation, and specific industry operating systems and soft wares has become essential rather than desirable. (Sadashivam, 2020).
3. Rise of Novel Specialized Skills: Lot of new technologies such as block chain, artificial intelligence demand novel specialized skills.
4. Problem Solving and Critical Thinking: Decision making on the basis of analysis has become very important skill. Also, workforce is required to adapt themselves to the new technological advancements for solving complex problems in the current digital era. (Cabral & Dhar, 2019).
5. Significance of Emotional Intelligence and Soft Skills: Soft skills such as coordination in teams, effective communication and emotional intelligence have become crucial for the success. Effective communication which includes online collaboration tools, email etiquettes, and online presentation skills have become significant in the digital environment.
6. Need for Hybrid skills: with ever increasing role of technology in several industries, there is an increase in need for the workforce, who have hybrid skills. It would help them to bridge the gap between the emerging technologies and traditional roles. (Cabral & Dhar, 2019).

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Trends on Technological Accessibility and digital literacy

1. Digital Literacy: It can be described as the capacity to comprehend, effectively use and traverse across various digital technologies and platforms. It includes understanding and skills required to operate web browsers, laptops, smartphones, emails and various other software and operating systems. It is found that digital literacy to be lower in rural setting when compared to urban. The reasons include lack of instructional tools, less experience of digital platforms and limited access to technology. Level of socio-economic status also effects digital literacy significantly. Educated and higher income group population is found to be more technological proficient (Sadashivam, 2020).
2. Technology Accessibility: A major part of digital inclusion is to have access to internet with high speed. Education and telecommuting are possible with accessibility to broadband internet.
3. Device ownership: Possession of smartphone or computer is crucial for having access to technology. Ownership of smartphones depends on various factors such as income, education level and age.

Initiatives and Existing Policies:

National Skill Development Mission: It has been initiated in the year 2015, which focuses on enhancing productivity and employability of the workforce in India. It underscores training on skills and development across varied sectors in order to meet the demands of the fast changing job market. significant role has been played by the NSDM in augmenting the capacity for skill training. Sector skill councils have been set up to find the skill gaps and promote training programs relevant to industry. The Recognition of prior Learning element proved to be effective in giving recognition to skills through casual means. It has proved to be highly beneficial for proficient workers, as on opportunity to upgrade their employability. (Behera & Gaur,2022).

(Digital India Programme has been started in the year 2015 with the objective to transform the nation into a knowledge economy and digitally empowered society. It embraces initiatives pertaining to improvisation of digital literacy, providing digital infrastructure and promoting e-governance. Significant developments have been made by the program in augmenting the internet connectivity throughout the country, specifically in rural areas. Digital India has also played a pivot role in increasing digital payments and financial inclusion interventions such as Jan Dhan Yojana and Unified Payments Interface. Several e-governance services have increased such as Digi Locker, Aadhar and e-sign, which has facilitated document management and digital authentication. (Haldankar, 2018).

CONCLUSION

The study undertaken provides insight into the juncture of skill development, education, digital era by primarily focusing on the evolving workforce of the country. The study outlines that though India has been, making promising developments in the field of skill development and education, there need to be more focus on curriculum which is more

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digitally oriented. The fast-changing pace of technological change demands for a significant shift in the skills required by the India's workforce. Proficiencies in artificial intelligence, data analytics and digital literacy have appeared to be principle for acquiring success in the digital world. It has been explored that the Digital India Programme and the National Skill Development Mission have played a very pivotal role with reference to changing needs of the Indian workforce. The current study strongly advocates that the initiatives and policies that focus on quality education and skill development play a crucial role in developing an inclusive society. It is very vital that initiatives and policies are not only employed but also refined continuously to remain viable.

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