

Impact of Higher Education and Skill Development on
Employment Generation and Socio-Economic
Development: Identifying the critical components of
skill development and understanding the potential for
technology-enabled transformation in education

Aiswarya M

Introduction

Rapid technological advancement causes abilities to depreciate quicker than in the past, while new technologies create skill gaps and necessitate the acquisition of relevant skills as well as lifelong learning. Strong cognitive abilities, fundamental information and communication technologies, and analytical skills, as well as a variety of non-cognitive talents and communication, are appropriate skill combinations for future occupations. Additional training and upskilling workers is also essential, especially as life expectancy rises. All of these developments necessitate a substantial rethinking regarding education and skill development throughout a person's life. The rapid growth of technology creates new opportunities for both companies and people. However, willingness to accept and deploy new technology varies widely between countries, sectors, and businesses. Economy's infrastructure which includes the digital infrastructure such as data and mobile connections, network and internet centres and company operations may be used to measure preparedness. However, as technology transforms job involvement, employee preparation for these changes will be the most important element in determining success. Work as well as the workplace will begin to seem very different from what they do now. Workers' skills deteriorate in lockstep, necessitating appropriate workforce skill management.

By combining modern technologies with current infrastructure to develop click-and-mortar platforms, the present generation may be equipped with job-ready skills. The use of technology for skill development can result in reduced prices, higher quality, and a wider reach, all while decreasing the strain on physical infrastructure. Social innovations are thriving in a society which has become a global community as geographical and temporal borders have crumbled. The new motto for technical education and skills is "learning by doing." Workers' preparation for digital occupations and technology adoption differs greatly across borders. Better-income nations often have higher skill levels and hence a stronger capability for utilising increasing technology; on the other hand, underdeveloped regions of the world are considerably hampered in absorbing new technologies. As a result, governments must concentrate on how to persuade employees to acquire skills that suit changing employment needs and to keep and upgrade these abilities throughout their careers. Strong cognitive abilities such as reading and arithmetic, basic information technologies, analytical thinking, and non-cognitive capabilities ranging from creativity to problem-solving and critical reasoning would be appropriate skill mixtures for future occupations. Interpersonal and communication skills, as well as emotional abilities such as self-awareness and the capacity to handle stress and adapt to change, are becoming

increasingly crucial. All of these developments necessitate a significant reassessment of skill development.

Literature Review

According to (Paul, 2014), the most compelling argument in favour of digital learning systems is their cost-effectiveness. Innovative learning methods are front-loaded, which means that there is a significant initial investment in technologies and equipment, but once that hurdle is overcome, there is very little required in actual deployment. Based on the findings of (Paul, 2014), a distant learning programme costs one-third the price of a campus programme.

According to (Kim & Park, 2020), transition poses a significant policy issue, particularly since employees are likely to enjoy longer careers as life expectancy rises. The article demonstrates how new technologies are causing skill and salary inequalities, increasing population inequality. As new technologies boost demand for individuals with high capabilities in complicated occupations while decreasing need for minimal skills and regular activities, gaps may form. Rapid technological progress, according to (Kim & Park, 2020), might thereby exacerbate inequality by rendering certain employment redundant. Without concerted efforts along with effective policies the income disparity between skilled and unskilled employees would exacerbate the trend of income inequality, causing social unrest and harming inclusive growth initiatives.

Through their study, (Bloom, Canning, & Chan, 2006) discovers that increasing vocational training may be significant in ensuring accelerated technological capture and improving a country's capacity to optimise its economic production. They underline that technological catch-up is still a significant factor in moving near the production potential frontier; nevertheless, it does not appear to drive it out. (Bloom, Canning, & Chan, 2006) calls into question the conventional wisdom that tertiary education plays little role in encouraging economic growth. Tertiary education may increase technical catch-up and so aid to optimise Africa's potential for maximum economic growth given existing limits.

(Alderete, 2017) comprehends the function that information and communication technology play in the economic growth of countries. Their suggested model investigates the link between ICT access (availability of ICT infrastructure and individual access to ICT), ICT

use (ICT intensity and usage, as well as ICT skills), and socioeconomic development. A Structural Equation Model is used in their technique (SEM). To attain this purpose, country-level statistics from 163 nations ranging from poor to developed are employed. (Alderete,2017) discovered that ICT use and skills have a moderating influence in the link between ICT access and socioeconomic development. They believe that adoption of ICT and ICT skills boost ICT access's influence on socioeconomic progress. They also investigate how the use of ICT might facilitate development by providing access to new markets, production increases, and access to information and skills when applied to local characteristics and individual issues.

According to (Gupta & Agarwal, 2018), India's demographic dividend benefits from an increase in the working-age population (15-59 years) compared to the dependant demographic (0-14 and above 60 years). According to their projections, by 2035, the youth explosion will be at its pinnacle, giving an excess of human capital to power the economy's expansion. According to (Gupta & Agarwal, 2018), India would need to recruit 109.73 million individuals by 2022 to meet skill gaps in various industries. Based on the reported skill gaps in the state-wise reports and data produced from the NSDC sector-wise reports, there is a 33% disparity between the incremental manpower demand projections of the state-wise skill gap reports and state-specific breakups of the same determined from the sector-wise reports. According to the study, if the skill India Development initiatives are effective, India might have a 47 million labour surplus. Furthermore, due to the global ageing impact, India may become the dominant source of personnel in meeting the massive workforce gap by the 2020s.

Current Scenario

Governments view public training and employment programmes, as well as other labour force policies, as tools for re-entering the labour force the jobless and economically disadvantaged. Since the second part of the twentieth century, economists have closely examined governmental employment and training programmes to determine their success. One explanation for the lack of effectiveness of productive labour market strategies is that they are aimed at disadvantaged teenagers or adults that have not received appropriate human capital investment for a long time. New skills build on old ones, and it is difficult to compensate for 20 years of underinvestment in human capital with a training programme that lasts only a few months.

While government training programmes have been proven to be ineffectual in most cases, the effect of commercial labour market programmes has been reported to be favourable, but with large differences between demographic groups. Returns to private on-the-job training (that is, with education within a business) are proven to be high for educated individuals, whereas returns to government job training are very low for less educated workers, confirming the premise that skills beget skills. The relevance of childhood education is one of the most significant advances in the literature regarding capital and education. (Kim & Park, 2020).

In India, skill development does not prioritise the job-ready skill set that programme graduates are supposed to have. The capacity to operate with current technologies is a critical talent that is lacking. The world has been caught off guard by the technological revolution. Almost every area of the labour force has been impacted by technology in the previous several decades.

Recommendations

Understanding technology and utilising it productively is critical for those who are just starting out in the workforce. This is due to the fact that technology will assist them in remaining aware of, and even learning about, the new abilities that they'll need to learn in order to remain meaningful in their sector of work. Technology also aids in good cash management and provides a wealth of beneficial information. As a result, ensuring that graduates of India's Skill Development Programmes are very well trained in leveraging internet technology to their advantage is as crucial as job-related abilities.

Technology has a significant influence on the development of learning societies because it makes learning more available to a broader spectrum of learners. This has huge promise for creating a more united and vibrant learning society. The importance of technology in education, in particular, is quickly expanding. Skill development programs are typically utilised to provide students with the fundamental abilities required for employment. With the growing need for digital tools in school, digital literacy may be included into skills training programmes to assist prepare young individuals for the intimidating technological world that awaits them. Technological gadgets are also frequently utilised as educational aids to develop skills in a variety of talents and cognitive abilities. Scholars have started to suggest that technology is having a positive influence in these areas

More importantly, incorporating technology into vocational education can assist in closing the digital gap in society. Students from low-income households are less familiar with technological devices and apps than students from higher-income families, and as a result, they are far less likely to be exposed to technologies in education programmes and tools to improve their employability. Public policies can have a significant influence on the effects of digital innovations on the future of work. With the fluid idea of employment and vocations in the future owing to the effect of new technologies, an increasing focus is placed on lifelong learning to stay up with technological advancements.

Future government policies must prioritise the transmission of technological knowledge through Skill Development programmes. Skill Development Institutes can employ modern educational technology devices in imparting information, skill-matching, and job finding, in addition to teaching the youth in the use of technology. Policies should be designed to bring about these improvements by enacting new policies as well as obtaining financing for such knowledge and innovation.

Conclusion

With a surge of rise of digital and other innovations, the speed of economic development has quickened, having a significant influence on the labour force. Skills are gradually becoming outdated as technology advances. Workers' skill management is also becoming increasingly crucial as life expectancy rises. The labour market's composition is changing toward professions demanding large cognitive and socio-emotional abilities, while those with a high routine component are being mechanised or offshored to variable degrees. For many decades, India has depended on ample labour to fuel growth in labour-intensive sectors. However, with fast ageing and the advent of the fourth industrial revolution, ongoing learning and labour market policies designed for the 'factory' model may no longer be appropriate for the region's future workforce. Workers and governments confront formidable problems as technology and the employment market evolve.

References

Akoojee, S., Mcgrath, S., & Gewer, A. (2005, November). South Africa: skills development as a tool for social and economic development. HSRC.

- Alderete, M. V. (2017). Examining the ICT access effect on socioeconomic development: the moderating role of ICT use and skills. *INFORMATION TECHNOLOGY FOR DEVELOPMENT*.
- ARORA, D. R., & Chhadwani, M. (2018, November 01). Analysing the impact of skill India as a tool for reshaping Indian economy. *IJRAR- International Journal of Research and Analytical Reviews*.
- Bloom, D., Canning, D., & Chan, K. (2006, February). *Higher Education and Economic Development in Africa*. Harvard University Press.
- Gupta, D. D., & Agarwal, S. (2018, April). SKILL DEVELOPMENT INITIATIVE- LITERATURE REVIEW. *Journal of Modern Management & Entrepreneurship (JMME)*.
- Kim, J., & Park, C.-Y. (2020). Education, skill training, and lifelong learning in the era of technological revolution: a review. The Australian National University and John Wiley & Sons Australia, Ltd.
- Mayer, M. J., & Altman, M. (2005, March). South Africa's economic development trajectory: implications for skills development. *Journal of Education and Work*, Taylor & Francis Group Ltd.
- Nilsson, A. (2010). Vocational education and training – an engine for economic growth and a vehicle for social inclusion? *International Journal of Training and Development*, Blackwell Publishing Ltd.
- Oviawe, J. I. (2018, January 10). Revamping Technical Vocational Education and Training through Public-Private Partnerships for Skill Development. *Makerere Journal of Higher Education*.
- Pandey, A., & Nema, D. (2017, July). Impact of skill India training programme among the youth. *International Journal of Multidisciplinary Research and Development*.
- Paul, S. (2014, January). *The Impact of Technology on Skill Development*. Shri Ram Centre for Industrial Relations and Human Resources.
- Strydom, J. (2005, March). Tracking study on skills development and employment generation of small retail establishments in Mamelodi, Tshwane. *Southern African Business Review*.