

Building Competencies for the Workplace: A Study on the Influence of Skill Development in Education

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Abstract:

This paper reviews and analyzes the literature on the effect of skill improvement on schooling on employment in India. The predominant goal of this review of research is to study the impact of talent improvement packages on performance in the Indian schooling gadget. It examines the concept of talent development in education, assesses the effectiveness of existing applications, and identifies demanding situations encountered throughout implementation. Comprehensive literature evaluations and bibliometric seek strategies are used to research and synthesize studies, reports, and related works. The findings highlight the significance of upgrading abilities in addressing employment challenges, bridging the space between instructional and enterprise wishes, and enhancing financial increase. It concludes by way of discussing the demanding situations confronted in implementing skills development applications and identifies strategies that can be used to overcome them and contribute to the present literature by imparting insights into the effect of skill development on career components in Indian education

Keywords: Skill-development, higher-education, Employability, Economy

Introduction:

In today's fast-paced and dynamic global economy, the importance of skills in education has become increasingly apparent. With a growing population and an increasing need for skilled labor, India has recognized the importance of skills development to bridge education and employment gaps. As India seeks to meet the challenges of a dynamic global economy role, skills in education and employment offer significant opportunities for India can enhance its growth and capacity to train skilled workforce by addressing the challenges faced by the current system and strategies such as skill development and integration, entrepreneurial employment, expanding vocational training and enhancing the use of technology. The objective of this literature review is to examine the impact of skill development in education and its impact on different aspects of employment in India. Skill development is crucial in enhancing individuals' employability skills and competencies, contributing to economic growth, poverty reduction, and social Inclusion. (Shenoy & Shailashri, 2023)

In India, where the workforce is anticipated to surpass all others in size by 2027, skill development is crucial for fostering economic expansion, boosting productivity, and satisfying market demands. (Sanghi & Srija, 2015). The lack of skill standards and the mismatch between industry demands and skilling facilitators are just two of the difficulties in skill development. This makes it challenging for trainees and students to comprehend what is expected of them, what modular programs they require, or what online learning they should engage in to acquire the necessary abilities. (Basar et al., 2021)

Given the significance of skill development, a strategy to close the skill gap and advance employability skills and competencies must be investigated. (Charu, 2019) For instance, 1344 CEOs from various industries and geographical locations proposed reskilling, upskilling, investing in staff development, and working with educational institutions to create pertinent training programmes. In addition, using innovation and technology to boost productivity and multi-skilling is proposed as a viable remedy. (World economic forum, 2020)

Background of the Topic:

India's journey closer to ability development in education can be traced again to the early 2000s whilst America identified the need to bridge the gap between graduates' abilities and employment desires Historically, the schooling system in India has targeted overall academic competencies, neglecting realistic vocational competencies. However, the converting international financial dynamics and multiplied call for skilled exertions caused a shift in wondering.

The current country of talent improvement in the Indian training device highlights the need for proactive measures to equip people with the vital sensible competencies demanded by the labor marketplace. Although traditional training fashions are critical, they frequently fail to prepare students for the demands of an evolving group of workers. Recognizing this gap,

the Government of India has released numerous skill improvement initiatives and applications to cope with the problem.

A key initiative is the Prime Minister Kaushal Vikas Yojana (PMKVY), released in 2015. PMKVY ambitions to offer talent education to millions of Indian youths in various sectors, with a focal point on expertise and certificates, its miles about raising jobs to increase productivity. These authorities' efforts emphasize the commitment to increase a skilled staff that matches the evolving needs of the financial system.

Skill development is essentially related to employment and getting entry to professional hard work in India. According to the National Skill Development Corporation (NSDC), India is predicted to witness a sharp growth in the running-age populace, with around 12 million individuals coming into the job market each year. The mission lies in making sure that those individuals own the applicable skills and abilities to meet the needs of the task marketplace. Skill improvement plays an important role in enhancing employability, lowering unemployment quotes, and driving an economic boom.

Significance of the Research:

In the following sections of this literature assessment, we will delve into the various strategies for talent improvement in schooling in India, including the effectiveness of numerous guidelines, challenges confronted and possible strategies for improvement.

Research on the impact of skill development in schooling and its impact on employment aspects is of notable significance for the Indian team of workers. According to the International Labor Organization (ILO), nearly thirty percent of India's population falls inside the 15-29 age bracket, making talent acquisition a top priority. Skill hole among task seekers and addressing the gap between employers is vital to the sustainable boom economy of the Indians.

Understanding the impact of skills improvement in schooling on employment consequences is vital for coverage makers, academic institutions, and other stakeholders. This literature overview seeks to offer current research, reviews and initiatives on ability development in the Indian education gadget. Taking that information collectively, the study aims to shed light on the effectiveness of skill development applications and their impact on extraordinary components of employment in India.

Literature overview:

The study of skill development in education is supported by a number of theoretical frameworks. According to Becker's (1964) human capital theory, investing in education and training increases an individual's productivity and, as a result, their economic value. Frameworks for competency-based education (CBE) emphasize the development of certain skills and competences that are applicable to tasks in the workplace (Le, Wolfe, & Steinberg, 2014). Furthermore, socio-cultural theories stress the significance of experiential learning and real-world applications in the context of skill acquisition (Vygotsky, 1978).

Creating a curriculum that is effective is essential to developing workplace competencies. The emphasis placed on theoretical knowledge over practical skills in traditional education systems frequently results in a mismatch between graduates' ability and employers' needs (Jackson, 2013). Modern curricula are progressively incorporating skill-based learning outcomes to close this gap. Research indicates that courses that include project-based learning, internships, and group projects help students become more employable by giving them practical experience and fostering their capacity for critical thought, problem-solving, and collaboration (Bell, 2010; Helle, Tynjälä, & Olkinuora, 2006). Saini and Budhwar in 2008, reported the role of local realities in human resource management in Indian small and medium enterprises (SMEs). The paper aims to address the problem of human resource management in the specific context of Indian SMEs by considering the influence of local realities such as cultural and socioeconomic factors. The research paper provides insights and recommendations for human resource management in Indian SMEs considering unique local realities.

In order to match education with the demands of the workplace, industry and educational institutions must cooperate together. Co-ops, internships, and apprenticeships are examples of work-integrated learning (WIL) programmes that give students firsthand exposure to the workplace and real-world experience in the subject matter of their study (Billett, 2009). Studies show that because WIL programme participants are accustomed to workplace norms and expectations, they perform better on the job and are more employable (Silva, Lopes, Costa, Seabra, Melo, Brito, & Dias, 2018).

Innovative teaching strategies are important for developing skills. It has been demonstrated that active learning techniques like role-playing, simulations, and flipped classrooms improve students' memory of practical skills and increase their level of engagement (Freeman et al., 2014). Furthermore, the development of digital literacy and technical abilities necessary in contemporary workplaces is facilitated by the use of technology in education, such as digital simulations and online collaborative platforms (Johnson et al., 2016).

Later, in the year 2017, Sarang Bhola reported a study to provide a comprehensive analysis of the relationship between professionalism, learning styles, and curriculum development. The aim is to deepen the understanding of how entrepreneurship is understood in learning contexts and its implications for the design and development of effective educational programs. The key concepts explored in the paper are performance, learning style, and curriculum. Even with the acknowledged advantages of skill development in the classroom, a number of obstacles still exist. Ensuring fair access to opportunities for high-quality skill development is still a major challenge, especially for marginalized communities. Furthermore, curriculum revisions must be made on a regular basis to keep up with the quickly evolving labour market (Schleicher, 2018). According to Darling-Hammond, Hyler, and Gardner (2017), in order to successfully adapt new pedagogical practices and incorporate industry-relevant skills into their teaching, educators also need to engage in continual professional development. Pratiksha Tiwari and Nittala Malati (2020) evaluated the entrepreneurial talents of commercial enterprise students in India. The goal of the survey was to assess the level of professionalism of business education students and identify areas for improvement. The research paper affords an assessment of entrepreneurship abilities amongst commercial enterprise students in India, highlighting regions of power and regions for development. The findings can be used to indicate interventions and strategies to enhance professionalism in vocational training packages.

Prabhat Mittal, Amrita Kaur, and Renu Jain (2022) investigated the role of online learning in growing entrepreneurial abilities amongst university college students. The purpose of the study was to analyze the mediating position of studying studies in this courting, looking to understand how online studying strategies first-rate support expert development. The research paper argues that online mastering strategies combined with course assessment can decorate entrepreneurial abilities among excessive college students. In the same year, Biswabhusan Behera and Mamta Gaur also investigated the connection between talent development schooling and employability in India. The objective is to understand how abilities development packages can decorate character productiveness and assist in dealing with the task of unemployment in the United States. The paper shows that ability improvement schooling may be an effective approach to enhancing productivity in India.

Objectives:

This literature overview targets to examine the impact of talent development in schooling and its impact on diverse aspects of employment in India, which includes projects like PMKVY (Pradhan Mantri Kaushal Vikas Yojana) and other skill development schemes. It will explore the concept of abilities improvement, look at the effectiveness of present skills improvement programs, and become aware of the challenges confronted in integrating skills development into the education device. By reviewing and integrating present studies, reports, and works on ability improvement in India, this study will offer valuable insights into and help articulate the effect of talent development on employment consequences inside the ongoing discourse on business improvement.

Through a complete assessment of literature reviews and related research, this has a look at objectives to provide insights into the impact of skill improvement on schooling throughout various factors of employment in India. The findings of this observation will make contributions to existing know-how, inform policymakers, educational establishments, and stakeholders about the effectiveness of competencies development applications, and provide hints for employment and capabilities acquisition to cope with challenges and maximize the impact of abilities improvement packages.

Conceptual Framework:

Skill development refers to the process of acquiring and enhancing the specific abilities, knowledge, and skills necessary to successfully perform and enhance tasks. On the other hand, education incorporates formal and informal learning programs aimed at imparting knowledge and developing cognitive abilities. The Indian education system has historically emphasized academic education and focused on theoretical knowledge. However, changing global dynamics and the need for a skilled workforce have increasingly recognized the importance of skills in education.

India's journey towards skill development received a boost with the establishment of the National Skill Development Corporation (NSDC) in 2008. The NSDC aims to foster partnerships with various stakeholders to promote skill development programs across sectors. Besides, the Government of India launched major schemes like PMKVY in 2015. PMKVY is one of the largest skill development schemes in the world, designed to provide in-service training to improve productivity and enhance skills of the difference has been fixed.

The Indian education system is evolving to integrate skill development into its framework. Traditionally, the system focused on theoretical knowledge without adequate emphasis on practical skills. However, the importance of skilling in education has been recognized, leading to the introduction of vocational training, apprenticeships, and industry partnerships. The integration of skill development into education aims to equip learners with both academic and practical

competencies, enhancing their employability prospects.

The relationship between skills and education is symbiotic. Education provides the foundation for knowledge, critical thinking, and problem-solving skills. Competencies support education by developing specialized skills related to specific tasks. By combining education and skills, individuals develop rounded capabilities, making them more competitive in the workplace.

The PMKVY scheme has contributed immensely to ability improvement in India. By 2021, PMKVY could have trained and authorized lakhs of people in various fields. The application makes a specialty of imparting training in line with industry desires, for that reason addressing the abilities hole. In addition, PMKVY has promoted industry participation and endorsed the supply of schooling and collaboration between employers.

The records highlight the progress made in abilities development in India. According to NSDC estimates, between 2014 and 2021, greater than a hundred million people were educated in numerous sectors. There has been a pointy upward push inside the range of skilled human beings in priority sectors inclusive of manufacturing, retail, car, and healthcare. These figures display the effect of abilities development applications in increasing productivity and creating an especially skilled body of workers.

In the end, ability development inside the education region in India has a huge effect on employment factors. The Indian education device is spotting the importance of integrating realistic abilities with theoretical know-how and is converting to combined ability development. Initiatives like PMKVY have a crucial position to play in ability development and improving employment. The courting between competencies and training is symbiotic, permitting individuals to gather a comprehensive variety of abilities. The figures show the progress made in capabilities development and display the advantageous effect on the Indian staff.

Important Skilling Initiatives:

Skills initiatives spearheaded by way of the Government, personal zones, and NGOs in India play a vital position in enhancing the productivity of people and addressing the skills hole. These applications have contributed immensely to the modern body of workers in India, equipped with people with enterprise talents.

To achieve this vision, the government published the first vision on skill development policy,” The National Skill Development Initiative in India 2009,” in the same year. In 2014, the government also set up a separate ministry called the” Ministry of Skill Development and Entrepreneurship (MSDE),” which brought all stakeholders of the skilling ecosystem under its preview. (Sharma, 2024)

1. Indian Government Initiatives:

a) Pradhan Mantri Kaushal Vikas Yojana (PMKVY):

Launched in 2015, PMKVY is one of the flagship skill programs of the Government of India. It aims to provide skill-based training to lakhs of young Indians working in various sectors. PMKVY offers skill training programs in line with industry requirements and awards certificates upon successful completion. The program focuses on building a skilled workforce while meeting the demands of the job market. PMKVY has contributed immensely to increasing productivity and reducing the unemployment rate by equipping individuals with skills and certifications. (PMKVY 2.0, 2016).

b) National Skill Development Corporation (NSDC):

Established in 2008, NSDC is a public-private partnership organization under the Ministry of Skill Development and Entrepreneurship. NSDC works in partnership with various sectors to develop skills development programs and facilitate linkages between training providers and services. It plays a vital role in promoting skill development across many industries and has helped upskill millions of individuals in India.

c) Skill India Mission:

Launched in 2015, the Skills India Mission aims to develop a skills-oriented Indian workforce. It encompasses various skill development programs and programs, including PMKVY, Apprenticeships and the National Apprenticeship Promotion Scheme (NAPS) Kaushal Bharat's mission focuses on creating a robust ecosystem for skill development, employment generation growth and career development.

2. Private Sector Initiatives:

a) Tata STRIVE:

Skill development has become a key priority for the Indian government in recent years, and as a result, several schemes have been launched to promote skill development across various sectors. Private sector companies have also been investing heavily in skill development initiatives to address the country's growing demand for skilled

workers. (Tara & Kumar, 2016) Tata Motors, ILFS Education, Fiat India, Bharti-Walmart, the OP Jindal Group, and the Mahindra Pride School are examples of companies that have contributed to skill development through various initiatives.

Tata STRIVE is an initiative of the Tata Group, one of the largest groups in India. It focuses on skills development and vocational training in many areas. Tata STRIVE offers courses and programs designed to meet the needs of businesses and enable productivity. The program partners with various stakeholders including industry partners, training providers, and government agencies to deliver comprehensive skills development solutions.

b) Wadhvani Foundation:

Technical expert Dr. The Wadhvani Foundation, founded by Romesh Wadhvani, focuses on skills and employment development. The foundation's skills programs include the National Enterprise Network (NEN) and the Skills Development Network (SDN). This program aims to empower individuals with appropriate knowledge and skills and contribute to productivity and economic growth.

3. Non-Governmental Organizations (NGOs):

a) Pratham:

The former is one of the largest NGOs in India working in the field of education and skill development. It runs several programs, such as the First Institute, which offers vocational training and skills development courses to young people from low-income areas. First's programs have had a significant impact on individual skills, especially in rural and underserved areas where there are many illiterate individuals in the country.

b) National Rural Livelihoods Mission (NRLM):

Established by the Ministry of Rural Development, NRLM aims to alleviate poverty and promote sustainable livelihoods in rural areas. It focuses on skill development and entrepreneurship development in rural areas. NRLM has partnered with various NGOs and organizations in the community to implement skill training programs to enable rural youth to become employable.

Leading these skills programs, be it government, private, or NGO, has contributed immensely to the current workforce in India. It provided their individuals with industry-relevant knowledge, increased their productivity, and facilitated their integration into the workforce. These projects have not only provided vocational training but have also focused on soft skill development, career development, and creating a suitable ecosystem for skill development.

Moreover, these skills initiatives have helped reduce unemployment, address the skills gap, and boost economic growth in India by providing training programs tailored to industry needs and certifications, these policies have created better employment opportunities for individuals and contributed to the country's workforce in a meaningful way.

The Indian government has been working on strengthening the country's vocational and skill development ecosystem to bridge the gap between supply and demand for a skilled workforce. This was highlighted in the report of the task force on skill development, published by the Planning Commission in May 2007. In line with this objective, the government established the National Skill Development Corporation (NSDC) in 2009, which catalyzes skill development by providing funding to enterprises, companies, and organizations that provide skill training. (Dekha & Batra, 2016)

The National Skill Qualification Framework (NSQF), launched in 2013, is a quality assurance framework that establishes a common language for skills and qualifications and creates pathways for career progression and lifelong learning. It covers all levels of learning, from basic literacy to doctoral-level qualifications and provides a standard reference system for all qualifications in India, including academic, vocational, and technical qualifications. (Mishra, 2013)

The role of a teacher in skill development is vital. Teachers play a significant role in shaping the future of their students by helping them develop necessary employability skills. Teachers must apply appropriate teaching methods and strategies to enhance students' employability skills. According to Hussain, Kumar, and Sarita, these methods include interactive and student-centered learning opportunities, simulation, experimental learning, role play, project and problem-solving activities, case studies, presentation and report writing activities, asking students to work in pairs and small group settings, and creating an environment that reflects the students' life in societal, intellectual and linguistic occurrences. (Shruti & Chavarkar, 2020) Furthermore, teachers should act as facilitators rather than teachers and focus on task-based teaching-learning activities that maximize learners' opportunities. To enhance students' employability skills, they should create a workplace setting such as on-the-job training, internship and work-study programs. Teachers should also replicate the classroom as a work setting and assign

students tasks similar to those per-formed in actual workplaces and following norms and standards. This helps students understand and adapt to the real-world environment. (Shahabadkar, 2021)

Factors Affecting Skill Development and Employment Outcomes:

With a growing population and demographics, India faces the challenge of equipping its workforce with the necessary skills to meet the demands of a rapidly growing economy. Historically, the Indian education system has it's primarily focused on imparting theoretical skills. The need for intervention is emphasized.

The impact of skills regulations in India has been widespread, although challenges remain. These packages have contributed to multiplied productivity and possibilities for people from special socio-monetary backgrounds. Skill improvement packages have centered on vocational education, career improvement, and soft ability development, with the purpose of providing individuals with task-related understanding. As a result, there was a gradual transition to the employment of guides and abilities to be recognized and assessed alongside conventional educational qualifications. However, demanding situations stay in the implementation and scalability of abilities improvement applications. Issues along with satisfactory, standardization of education modules, assessment and certification procedures, equal abilities possibilities, and so on need to be addressed.

Effective skill improvement plays a critical role in enhancing productiveness and employment growth in India. A range of things influences knowledge development and career effects, which include figuring out and reading the important thing drivers of powerful abilities development in training, the function of instructional establishments in talent improvement and professional development, and the impact of socioeconomic factors on talent improvement and employment. This section examines those elements and their importance in shaping the talents panorama in India.

Identification and Analysis of Key Factors Influencing Effective Skill Development in Education:

To understand the dynamics of skills development in education, it is important to identify and analyze the key drivers of its effectiveness. These factors include:

- a) Curriculum Relevance:** The curriculum should align with industry requirements and reflect trends and emerging technologies to ensure that students acquire relevant and up-to-date knowledge.
- b) Quality of Instruction:** Effective teaching methods, qualified teachers, and practical training opportunities are essential to effectively develop skills and prepare students for the demands of the job market.
- c) Industry Partnerships:** The continuity between educational institutions and industry facilitates industry exposure, internships and real-world projects, enabling students to gain hands-on experience and develop industry-specific skills.
- d) Continuous Learning:** Encouraging a culture of lifelong learning and providing opportunities for upskilling and reskilling is critical for individuals to adapt to changing job demands and technological advances.

On examining the role of educational institutions in skill development and career development note that educational institutions play an important role. This process can be supported in many ways:

- a) Curriculum Design:** Educational institutions need to design curricula that incorporate skill-building components, such as practical training, internships, and industry projects, to bridge the gap between theoretical knowledge and practical application.
- b) Career Guidance and Counseling:** Providing career guidance services helps students identify their strengths and interests, make informed career choices, and align their skill development efforts with their career goals.
- c) Industry-Academia Collaboration:** Collaborating with industries enables educational institutions to understand industry needs, update curricula accordingly, and facilitate internships, guest lectures, and mentorship programs that enhance students' employability.
- d) Entrepreneurship Promotion:** Encouraging entrepreneurship among students fosters innovation, job creation, and self-employment opportunities, contributing to overall economic growth.

Exploration of the Influence of Socio-Economic Factors on Skill Development and Employment Outcomes: Socio-economic factors significantly impact skill development and employment outcomes in India. These factors include:

- a) Economic Disparities:** Socio-economic disparities, including income inequality and regional imbalances, can affect access to quality education and skill development opportunities, creating barriers for marginalized populations.
- b) Gender Disparity:** Gender biases and inequalities in educational attainment and access to skill development programs can limit employment opportunities for women, emphasizing the need for gender-inclusive policies and initiatives.
- c) Rural-Urban Divide:** Rural areas often face infrastructure gaps and limited access to skill development programs compared to urban centers, impacting employment prospects for rural populations.
- d) Government Policies and Programs:** Government initiatives like PMKVY and Skill India Mission aim to address socio-economic disparities by providing skill development opportunities to underprivileged sections of society, reducing unemployment rates, and fostering inclusive growth.

Several factors affect effective skill development in education, such as relevant curriculum, quality of teaching, industry partnerships, attention to continuing education and educational institutions play an important role in skill development and employment development through curriculum design, career guidance, project-learning-based collaboration, and professional development. In addition, socio-economic factors such as income inequality, gender inequality, rural-urban divide, and government policies affect skills development and employment outcomes. Understanding and implementing these factors is critical to developing programs and initiatives to increase skill development, reduce unemployment, and create a more inclusive and prosperous workforce in India.

Challenges:

Skill development in education plays a crucial role in preparing individuals for employment and enhancing their employability. However, several challenges and limitations hinder the effective implementation of skill development initiatives in India. There are many factors that could be barriers to effective implementation. The insufficient infrastructure, particularly in rural areas, poses a significant barrier to implementing skill development programs. Inadequate training facilities, access to technology, and practical learning resources hinder effective skill development.

The World Economic Forum's Future of Jobs report highlighted that by 2022, more than half of all employees in India would require significant reskilling and upskilling to meet the demands of the Fourth Industrial Revolution. This indicates a significant skill gap that needs to be addressed to improve employment prospects. The shortage of qualified faculty members with industry experience and expertise in delivering skill-oriented education limits the effectiveness of skill development initiatives along the gap between educational institutions and industries hampers the alignment of curricula with industry requirements. Outdated curricula and a lack of industry exposure undermine the relevance of skill development programs.

Access to skill development programs is unevenly distributed, with a significant gap between urban and rural areas. According to the National Sample Survey Organization (NSSO), only around 2% of the rural population in India had received formal vocational training. Socio-economic disparities create barriers to accessing skill development programs, particularly for marginalized sections of society. The limited availability of programs in rural areas and financial constraints further exacerbate the access issues. Furthermore, Women in India face multiple challenges when it comes to skill development and employment. The National Skill Development Corporation (NSDC) reported that in 2019-2020, women constituted only 27% of the total enrollment in skill development programs. Gender biases and societal norms restrict access to skill development for women, limiting their employment opportunities and perpetuating gender inequalities.

Effective implementation of skill development in education in India faces several challenges and constraints. Resource constraints, limited teacher knowledge, infrastructure, and academic gaps hinder the effective implementation of skills development programs. Issues related to skills acquisition including socioeconomic disparities and gender equity constrain individuals' re-authorization to participate in skills development programs. Systematic research methods to measure and evaluate the impact of skills development in education, long-term impact, positive impact, information an effective availability and integration is needed. Addressing these challenges and constraints is essential to increase the scalability and scope of skills development programs and ensure that they contribute effectively to the overall productivity and growth of the Indian workforce.

Future Directions for Skilling in Education:

Many countries, including India, have implemented policies and programs to improve skills in education. These programs aim to bridge the gap between educational and business needs, encourage career development, and provide individuals with the skills needed for a growing labor market. Evaluation of the effectiveness of these programs is needed to determine the impact on education and skills employment outcomes.

As India looks to the future, it is important to explore the opportunities that lie ahead in terms of skills in education and employment. India with its youthful population and growing aspirations recognizes the urgency of addressing the skills gap and providing a strategic approach. However, the current system faces various challenges, including an outdated curriculum, poor collaboration among entrepreneurs, and lack of adequate skills opportunities, and these challenges tend to limit graduates' skills and those of employers the search does not match. It is therefore important to identify strategies that can help improve the current system and harness the potential of knowledge in education and management. Learning analytics has emerged as a promising research area that collects, assesses, and interprets data to illuminate various aspects of each user's learning process. Technological advancements in the current times have led to the creation of various learning management systems and digital technologies that can produce and demonstrate data visualizations in a way that can be considered as 'learning analytics'. (Mittal et al. 2022) Learning analytics is a process of gathering, measuring, investigating, and reporting data related to learners and their environment to improve

learning by augmenting the learning environments.

In 2017, Ming Wong conducted research and wrote a report on learning analytics. Learning analytics is mostly utilised in educational institutions to improve student performance in understanding and learning materials. Early studies examined and demonstrated improved student learning outcomes, learning support, and teaching. However, the suggested potential of learning analytics in student skills could not shift the higher education practice in the past few years. (Wong, 2017) Despite the challenges in managing enormous data, more innovative technologies and learning analytics enable higher educational institutes to teach employability skills to students. Learning analytics regularly assesses adaptive learning outcomes by collecting and analyzing the data related to learning, thereby instilling data analytics and teamwork skills in learners. (Mittal et al. 2022) Intended learning outcomes of educational programs and assessing the students' progression are critical factors for the students' employability. The rapid changes in the online learning process have shown a new direction for research in teaching-learning pedagogy beyond workplace boundaries. It has offered event-based and outcome-based learning, usually mediated by integrating new technology and ICT tools. The gap between skills and employment opportunities and the burden of training on employers can be addressed meaningfully through the e-learning process.

A key attention is the mixing of abilities development into unique training. By incorporating competency-based mastering modules into the curriculum, college students can acquire relevant knowledge during their academic education. This integration, not handiest provides students with vital talents, however, also guarantees that their training suits the wishes of the activity market.

Cooperation among educational institutions and enterprises is any other critical place. This engagement permits them to discover industry-specific abilities and needs and develop suitable competency plans. It allows internships, courses and commercial enterprise visits, presents college students with useful facts, and facilitates their transition from education to employment.

Furthermore, the expansion of vocational training establishments and professional development are capacity avenues for growing new pathways for talent acquisition. By adapting to the ability to develop surroundings, individuals have multiple possibilities, catering to their unique pursuits and strengths.

To enhance the skills and educational domain, future research should focus on the following areas:

- A. Longitudinal Studies: More detailed research is needed to examine the long-term effects of skills upgrading in education on career development and career development. This will provide insight into the sustainability of acquired skills and the effectiveness of skills management programs over time.
- B. Impact of Technology: Explore the role of technology, including artificial intelligence, machine learning, and virtual reality, to enhance skills development and transform education. Examine the effectiveness of technology-enabled learning programs and their impact on skill outcomes.
- C. Socio-Economic Factors: Examine the impact of socio-economic factors such as income inequality, gender inequality, and neighborhood inequality on skills development and employment outcomes. Identify ways to mitigate these factors and encourage participation in skills management programs.
- D. Employer Perspectives: Explore employers' perceptions and expectations about skills and competencies needed in employees. Understanding the needs of the employer can inform the design and implementation of skills development programs in line with industry requirements.

Analysis of existing policies and their impact on the knowledge base in education is essential to shape and improve future policies. Recommended policy changes can strengthen skills policies, improve employment prospects, and contribute to a skilled workforce. In addition, future research directions may provide valuable insights into emerging trends, technological developments, and socioeconomic factors that affect skill development and employment outcomes. By addressing these recommendations and further research, we can pave the way for more effective and impactful skills programs in education in India and beyond.

Employability skills are related to e-learning, where students can gain the skills and personal attributes that enable them to achieve a successful career. (Rakesh, 2016) Earlier studies have examined the relationship between employability skills, e-learning knowledge, and skills and how students can develop their careers during social and technological changes. Universities can play a crucial role in improving the employability of their students by incorporating employability skills as an integral part of their study programs. This will prepare students to meet the demands of the rapidly changing job market and enhance their career prospects. The curricula should be designed to balance theoretical knowledge and practical skills that can be applied in the workplace. (Tiwari, 2020) It is also essential for universities to regularly review and update their curricula to stay in line with the changing demands of the job market. This will ensure that graduates are equipped with the latest skills and knowledge relevant to the

industry. Regular workshops and training sessions should also be organized to provide students with opportunities to develop their employability skills. Lastly, universities should collaborate with the labor market to integrate education and ensure that the skills and knowledge they provide align with employers' expectations. (Behera, 2022)

Methods of Literature Analysis:

The current research considered relevant publications on skill development in India from the years 2002 to 2023. These publications were sourced from journals indexed by leading multidisciplinary databases. Scopus, which holds significant academic significance and enjoys broad international consensus, was utilized for the search and retrieval of the publications.

One of the main techniques used to evaluate different aspects of this endeavor stands out as bibliometric analysis. It not only makes it possible to look back on scientific development and dissemination, but it also makes it easier to assess an institution's research potential. Additionally, bibliometric analysis aids in describing the development of scientific fields, their areas of study interest, and the geography of publications within a particular body of knowledge. Additionally, it aids in spotting dispersion and obsolescence tendencies in scientific papers.

The search query "skill development" was applied in Scopus, resulting in the retrieval of 240 documents. The focus of the study was narrowed down to include only journals published in India from the year 2000 to the present. Data extraction was conducted by directly accessing the databases, considering the following variables:

- a) Number of documents published by year.
- b) Subject area of the documents
- c) Affiliations of the documents

The search criteria adopted, and results are presented below.

The term 'Skill Development' was employed as the search concept, focusing on the title, abstract, and keywords of the articles. This search yielded a total of 6071 documents in Scopus. The systematic review selected articles based on the following criteria:

- (1) The thematic area is Social Sciences.
- (2) Restricting to India
- (3) Limiting the date range from 2002 to 2023.

The total number of publications was reduced to 240 after the application of the criteria.

The analysis of the two databases yielded quantitative and qualitative data, which are presented separately to facilitate a comprehensive evaluation.

The annual scientific output in Scopus exhibits a consistent pattern, with a significant surge since 2008. This surge can be attributed to the implementation of the Skills Development Initiative (SDI) scheme by the Government of India in 2008. The SDI scheme aimed to provide vocational skills training to meet the demand, targeting 1 million individuals within the following five years, and subsequently 1 million individuals annually to support skills training, certification, and upgradation in the unorganized sector.

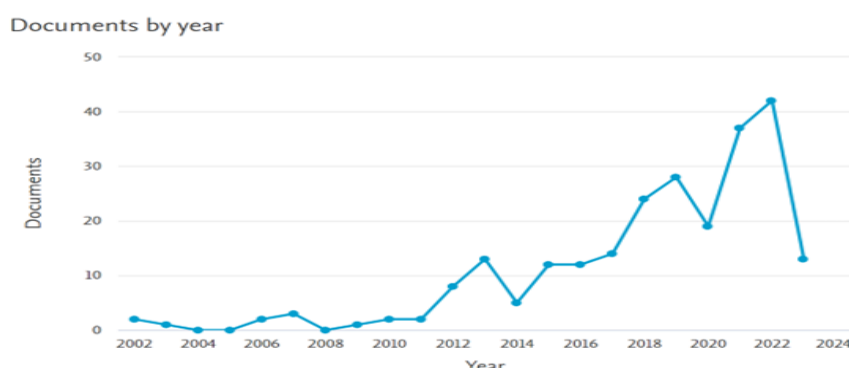


Fig 1. Annual scientific publication

Notably, the years after 2020 witnessed the highest scientific production concerning these topics. This can be attributed to the growing recognition by companies of the significance of soft skills, including communication, creativity, teamwork, and others, possibly influenced by the emergence of the pandemic during those years.

In terms of institutions and authors' affiliations involved in Skill Development research, the study examined the publication

output of prominent institutions. The findings indicate that Jawaharlal Nehru University and Indira Gandhi National Open University ranked highest with 8 publications each. Following closely are the Indian Institute of Technology Bombay and the Indira Gandhi Institute of Development Research, each with 5 publications.

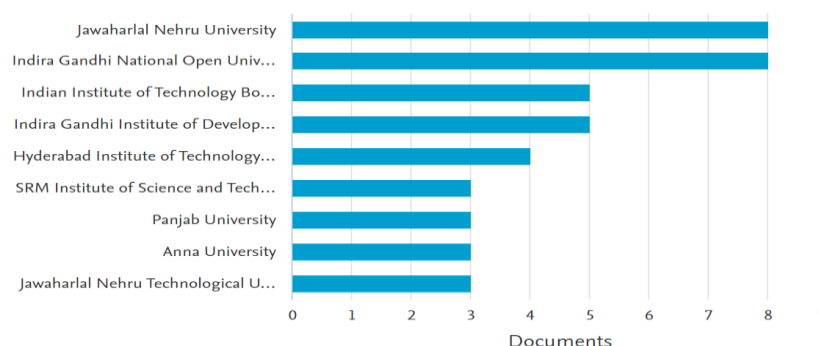


Fig 2. Documents by Affiliation

The Tree map visualization in Scopus is a hierarchical representation that utilizes rectangles to depict the proportional surface area occupied by a specific set of data based on one variable. This hierarchical approach allows for further subdivision based on additional variables, creating a multi-level representation as desired.



Fig 3. Tree map Representation

The presented Tree map visually displays the primary fields and categories that exhibit the highest production of scientific literature related to the keyword "skill development."

In terms of the Author keywords, the word clouds generated display the most commonly occurring words along with their co-occurrences in the analyzed documents.



Fig 4. Word cloud for Author keywords

This word cloud highlights the prominence of keywords such as skills, education, learning, development, training, and employability, indicating their central significance in the Scopus dataset.

Summary and Conclusion

This literature review in this paper examined the impact of skills policies on different aspects of education and employment in India. Skills have emerged as the key to meeting the country's growing demand for skilled labor and reducing the high rate of unemployment. The background to the title emphasizes the importance of preventing gaps it bridges the gap between the education system and the needs of industry to boost productivity and grow the economy.

The importance of the subject lies in its ability to make a difference in the lives of individuals by providing them with the skills and knowledge needed to secure gainful employment. Skill schemes in India, such as the Skill India Mission and various government schemes, have played an important role in promoting job training and skill development in various sectors. These schemes aim to provide skilled manpower that can contribute well to the economic development of the country.

The impact of skills policies on education and employment has been significant. A review of the literature indicates that individuals who developed skills programs experienced increased productivity, higher earnings, and job satisfaction as the skills not only facilitated destination work but enabled individuals to do it employees and supported their employment opportunities as well. Moreover, skills policies have helped to narrow the skills gap and promote inclusive growth by creating opportunities for marginalized sections of society.

However, there are some challenges and limitations that need to be overcome. A key challenge is the mismatch between skills acquired through skills programs and evolving job market demands. Keeping skills programs up-to-date and in line with business needs is essential to ensure their relevance and effectiveness. In addition, lack of adequate skills policies, disproportionate participation of private sector stakeholders, and regional disparities in skills opportunities are challenges that need to be addressed.

Looking ahead, the future direction of skills in India incorporates a holistic and multi-faceted approach. Greater collaboration between government, industry, and educational institutions is needed to develop and deliver skills programs that are demand-driven and in line with emerging technologies. Employment incentives and innovation should be emphasized rather than solely for job seekers. Strengthening curriculums, promoting lifelong learning, and using digital technologies to acquire skills are promising areas.

In conclusion, the impact of skills on education and employment in India is crucial for personal empowerment, economic growth, and addressing the challenges of unemployment. Skills programs have shown promising results, but there are challenges to overcome. By addressing boundaries, encouraging collaboration, and embracing alternatives, the skills available in India can continue to play a transformative role in shaping the workforce of the future and contributing to the socio-economic development of the country.

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