European Economic Letters
ISSN 2323-5233
Vol 14, Issue 2 (2024)
http://eelet.org.uk

Exploring the Key Elements of Skill Development, And Their Impact on Workforce Readiness and Employability

Venkatesh Sarvasiddhi[1*], NVM Rao[2] , Geetilaxmi Mohapatra[3]
[1]Research Scholar, Department of Economics and Finance, BITS Pilani, Pilani, Jhunjhunu 333031, Rajasthan, India. https://orcid.org/0009-0007-1165-229X,
[2]Senior Professor, Department of Economics and Finance, BITS Pilani, Pilani, Jhunjhunu 333031, Rajasthan, India. https://orcid.org/0000-0001-6329-7663
[3]Associate Professor, Department of Economics and Finance BITS Pilani, Pilani, Jhunjhunu 333031, Rajasthan,India. https://orcid.org/0000-0002-0037-4622

Abstract

This study explores the critical elements of skill development and their impact on workforce readiness and employability in India. Using Structural Equation Modeling (SEM) and a questionnaire survey, data was collected from individuals across various educational and professional backgrounds. The research identifies key factors such as technology, curriculum design, placement opportunities, state government schemes, and sector-specific skills as essential for effective skill development. Findings highlight the importance of incorporating both hard and soft skills in training programs, the role of technology in enhancing learning experiences, and the influence of demographic factors on the perception of curriculum helpfulness and job training. The study underscores the necessity for tailored interventions to address skill gaps, promote continuous learning, and ensure equitable access to educational resources. These insights provide practical implications for educators, policymakers, and employers aiming to foster a more skilled and competitive workforce. By understanding and addressing the diverse needs of learners, stakeholders can enhance employability and support the socioeconomic development of the nation.

1 Introduction

In the quickly changing global economy, the conversation around skill development has become more important than it has ever been. The need to develop a workforce with modern skills has grown critical as industries undergo waves of technical breakthroughs and changing market needs. The goal of this research study is to present a thorough knowledge of how these dynamics interact to create the labour market by examining the many aspects of skill development and their ensuing effects on employability and workforce readiness.

The broad notion of skill development includes the development, enhancement, and honing of the skills required for advancement in one's personal, professional, and social life. This review of the literature looks at the different aspects of skill development, how important it is, and the approaches used to promote skill improvement.

1.1 Defining Skill Development

A wide range of activities aimed at improving a person's aptitudes and competences are included in skill development. This covers traditional classroom instruction, career training, on-the-job training, and unstructured learning opportunities. Effective skill development strategies, according to UNESCO (2018), must incorporate soft skills like communication, problem-solving, and adaptability, which are becoming more and more important in today's collaborative and dynamic work environments, along with hard skills like technical abilities and knowledge specific to a given job.

Most people define skill development as the process by which people acquire and enhance the abilities necessary to carry out particular tasks efficiently. The International Labour Organisation (ILO) defines skill development as the process of acquiring new skills as well as upgrading current ones to improve productivity and employability (ILO, 2010).

Theoretical Perspectives

A number of theoretical frameworks provide light on the significance and meaning of skill development. These include:

Human Capital Theory: According to this theory, spending money on education and training increases a person's capacity for productivity, which boosts financial gains. According to Becker (1964), skill development is an essential part of human capital that affects economic growth as well as individual wages.

Capability Approach: Amartya Sen proposed the capability approach, which is centred on improving people's capacities to accomplish their goals. In this environment, developing one's skills is considered as increasing one's chances and freedoms (Sen, 1999).

Lifelong Learning: The idea of "lifelong learning" emphasises how skill improvement is ongoing throughout a person's lifetime. The concept of lifelong learning underscores the significance of flexibility and continuous learning in order to satisfy the ever-evolving demands of the labour market (Aspin & Chapman, 2001).

Types of Skills
The following categories can be used to group the wide range of talents that are included in skill development:

Technical Skills: These are abilities specific to a given job that are needed to carry out specified duties. According to Pavlova (2009), formal schooling, vocational training, and on-the-job experience are common ways for people to gain technical skills.

Soft skills: Also referred to as non-technical or interpersonal abilities, these encompass problem-solving, teamwork, communication, and emotional intelligence. Soft skills, which are frequently gained through experiential learning and personal development activities, are becoming more and more acknowledged as essential for success in the workplace (Robles, 2012).

Digital Skills: Given the speed at which technology is developing, having proficiency in areas like coding, data analysis, and digital marketing is crucial for success in today's job. It is increasingly recognized that digital literacy is essential to the development of skills (Van Laar et al., 2017).

Importance of Skill Development
The literature outlines various justifications for the importance of skill development:

Economic Growth: By boosting productivity and creativity, skill development promotes economic growth. Higher skill levels are typically associated with more robust economies and competitive industries (Hanushek & Woessmann, 2012).

Employment and Employability: People with more skill levels have a better chance of landing a job and being able to adjust to changes in the labour market. According to McQuaid and Lindsay (2005), skill development lowers unemployment rates and solves the skills gap in a variety of industries.

Social Inclusion: By giving underprivileged populations access to jobs and education, skill development fosters social inclusion. It promotes social cohesiveness and lessens inequality (Zimmermann, 2016).

Personal Development: Developing one's skills has advantages for the economy, but it also promotes personal development and self-fulfillment. It improves people's capacity to fulfil their objectives, both personal and professional (Heckman & Kautz, 2012).

Methodologies for Skill Development
Different approaches are used to build skills, and each has advantages and disadvantages:

Formal Education: Foundational information and skills are imparted through traditional classroom-based education. But it frequently has no real-world use, and it might not adapt quickly enough to changes in the sector (Bloom, 2006).

Apprenticeships and Internships: These programmes blend classroom education with on-the-job training. They are quite good at bridging the theory and practice divide (Fuller & Unwin, 2011).

Online Learning: Digital platforms provide accessible and adaptable chances to enhance one's skills. Learners can pick up new skills at their own speed with online courses and MOOCs (Massive Open Online Courses) (Yuan & Powell, 2013).

Workshops and seminars: These brief, targeted training courses offer chances to improve skills in particular fields. For continuing professional development (CPD), these are beneficial (Joynes, Rossignoli, & Fenyiwa Amonoo-Kuofi, 2019).

1.2 Impact on Workforce Readiness and Employability and its Economic Implications
Driven by technology advancements like automation, machine learning, and artificial intelligence, the workforce of the twenty-first century is defined by its fluidity and complexity. In addition to redefining employment positions, these innovations have made it necessary for people to continuously enhance their skill sets in order to remain competitive in the labour market. According to Bessen (2019), the introduction of new technology has changed the nature of old jobs and generated new ones, which has affected the skills that companies are looking for. As a result, there is now a greater

emphasis on continuing professional development and lifetime learning (Brynjolfsson & McAfee, 2014).

The ability of a person to successfully enter and navigate the labour market is referred to as workforce ready. The calibre and applicability of their skill set have a big impact on this readiness. Moreover, companies that make significant investments in training and development initiatives typically see increases in worker engagement and productivity (Noe, Clarke, & Klein, 2014).

Improving Job Performance: By giving employees the resources, they need to carry out their jobs effectively, skill development has a direct impact on job performance. Employees that possess strong technical and soft skills are better equipped to fulfil job requirements, find efficient solutions to issues, and advance organisational objectives. According to Carnevale, Smith, and Strohl (2013), an innovative workplace and high productivity levels depend on having a trained staff.

Bridging the Skills Gap: The "skills gap," or discrepancy between the abilities held by job seekers and the abilities required by employers, is a major obstacle to workforce preparedness. Good skill development initiatives can close this gap by matching the demands of the labour market with academic objectives. The significance of business alliances and policy actions in mitigating the skills gap and enhancing employability is underscored by the National Skills Coalition (2017).

Encouraging Economic Growth: By making firms and industries more competitive, a workforce with the necessary skills helps to stimulate economic growth. Competent personnel stimulate creativity, boost productivity, and help businesses adjust to shifting market conditions. Investment in skill development is crucial for both lowering unemployment rates and promoting sustainable economic development, according to a 2019 International Labour Organisation research.

Encouraging Career growth: By equipping employees to take on increasingly difficult and lucrative tasks, ongoing skill development encourages career growth. People who improve their skills and pursue lifelong learning are more likely to advance in their jobs and find fulfilment in their work. A McKinsey & Company (2020) study states that upskilling and reskilling programmes are essential for professional advancement and reducing the likelihood that automation will cause job displacement.

Employability is more than just being able to find work; it also includes being able to stay in that job and advance in your career. Employability is a multifaceted term that involves the interaction of individual characteristics, labour market conditions, and institutional support, according to Fugate, Kinicki, and Ashforth (2004). Employability is essential for economic growth and stability since a trained labour force fosters innovation and competitiveness, according to the World Economic Forum (2020). However, differences in the availability of high-quality training and educational opportunities can worsen inequality and impede the growth of the economy as a whole (Goldin & Katz, 2008).

Even while skill development is widely recognised as important, there are a number of obstacles that prevent it from being used effectively.

These consist of socioeconomic constraints that restrict access to learning opportunities, insufficient finance for education and training programmes, and a mismatch between the skills taught and the needs of the market. Addressing these issues requires, as Azevedo et al. (2020) note, bridging the gap between labour market demands and education systems. Furthermore, creating an atmosphere that supports skill upgrading requires government, business, and academic cooperation as well as legislative changes (OECD, 2019).

2 Methodology

2.1 Survey

The survey was designed to gather information on the participants' views and experiences regarding the effects of technology, curriculum, placement, state government schemes, and sectors on skill development.

The survey was designed to be concise, easy to understand, and to avoid any ambiguity to ensure a higher response rate. Closed-ended questions were used to quantify and analyze the responses. Thequestions relevant to the research objectives were carefully crafted.

European Economic Letters
ISSN 2323-5233
Vol 14, Issue 2 (2024)
http://eelet.org.uk

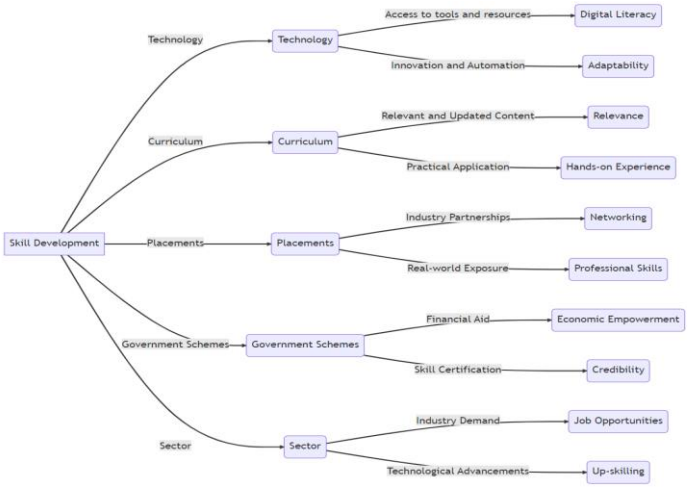

Figure 1: Conceptual Framework of Key Elements in Skill Development and Their Impacts

Table 1: Survey Questions on the Role of Technology in Learning and Job Preparation

Technology	
Construct	**Questions**
T1	Technology enabled me learning my modules better:
T2	Technology was necessary to learn my job role:
T3	Knowing technology was a pre-requisite to my job role:
T4	Technology related training was given during my course:
T5	My courses included technology related modules:

The survey was divided into five sections, each containing five questions. The first focuses on technology and its impact on skill development.

Participants were asked about the effectiveness of technology in enhancing their learning experience and whether technology was a requirement for learning their job role.

These findings provide insight into the role of technology in skill development and its impact on employability. Responses to these questions can help identify the importance of technology in skill development and whether it is necessary for employability.

The second section dealt with the curriculum, and participants were asked about the curriculum's design, instructor's knowledge, and if the curriculum was fully covered before the exams.

Table 2: Survey Questions on the Curriculum's Relevance and Delivery

Curriculum	
Construct	**Questions**
C1	Curriculum related information was provided to me:
C2	Curriculum was designed suitably for my job role:
C3	The instructor followed the curriculum throughout the training:
C4	The instructor/trainers/faculty had good knowledge of the curriculum:
C5	Curriculum/courses were completely covered before exams:

The third section addressed placement opportunities and how prepared the participants felt after training. They were also asked if they were provided with placement opportunities and if placement-related infrastructure was available in their trainingcenter.

Table 3: Survey Questions on Placement Support and Infrastructure

Placement	
Construct	**Questions**
P1	Placement related information was told to me before appearing for Interviews:
P2	Placement related training was provided:
P3	Placement opportunities were provided to me:
P4	The instructor/faculty prepared me for placement opportunities during my job role training:
P5	Placement related infrastructure was available in my training centre:

The fourth section focuses on state government schemes and their effectiveness in improving livelihoods. Participants were asked about the availability of counseling, any conditions before availing the schemes, and if they had utilized them.

European Economic Letters
ISSN 2323-5233
Vol 14, Issue 2 (2024)
http://eelet.org.uk

Table 4: Survey Questions on State Government Schemes

State Government Schemes	
Construct	**Questions**
G1	I had counselling on the state government schemes:
G2	State government schemes was useful to me:
G3	State government schemes helped me improved my livelihood:
G4	State government schemes had any condition to fulfil before availing:
G5	State government schemes were utilized by me:

Finally, the fifth section addressed the importance of sector-specific skills, emerging technologies, and soft skills in finding jobs.

Participants were asked about their knowledge of various job sectors, the relevance of courses across different sectors, importance of emerging technologies and how helpful the Startup India movementwas in creating job opportunities

Table 5: Survey Questions on Sector

Sector	
Construct	**Questions**
S1	I know about various Job sectors in India:
S2	Selecting relevant courses across various sectors / fields is important for placements:
S3	Emerging technologies are very important for any sector to find Jobs
S4	Startup India movement is helping India in various sectors create Jobs:
S5	Soft skills are important in any sector to find Jobs:

2.2 Data Collection

An online survey tool was developed to collect data for the survey, which was easy to use and allowed quick data collection and analysis.

The survey was distributed to participants through various Pradhan Mantri Kaushal Vikas Yojna Centers (PMKVY), where they were asked to share their experiences and views on various aspects of the curriculum, teachers, placements, state government schemes, and sectors.

The survey was short and simple to encourage a higher response rate.

The participants were encouraged to share the survey with their friends and followers to increase their reach. Targeted advertising is also used to reach a wider audience.

Theonline survey tool allowed for easy tracking of responses, and the data were analyzed using statistical software to identify trends and patterns. The results were compiledand presented in a report format.

2.3 Validity and Reliability

Cronbach's alpha assesses reliability by comparing the amount of shared varianceor covariance among the items constituting an instrument to the amount of overall variance.

The idea is that if the instrument is reliable, there should be considerable covariance among the items relative to the variance. Cronbach's alpha is equivalent to the average of all possible split-half reliabilities.

Cronbach's alpha was used to check the validity and reliability of the data. For reliable data, the alpha value should be greater than 0.6.

Table 6: Reliability Analysis of Constructs using Cronbach's Alpha and 95% Confidence Intervals

Construct	Cronbach's Alpha	95% Confidence Interval Lower Limit	95% Confidence Interval Upper Limit
A: Technology			
T1	0.8512	0.836	0.865
T2			
T3			
T4			
T5			
B: Curriculum			
C1	0.9062	0.897	0.915
C2			
C3			
C4			
C5			
C: Placement			
P1	0.9199	0.912	0.928
P2			
P3			
P4			
P5			
D: State Government Schemes			
G1	0.9239	0.916	0.931
G2			
G3			
G4			
G5			
E: Sector			
S1	0.8781	0.866	0.89
S2			
S3			
S4			
S5			

European Economic Letters
ISSN 2323-5233
Vol 14, Issue 2 (2024)
http://eelet.org.uk

3. Results and Analysis

3.1 Technology

Technology is both a driving force behind the creation of new skill needs and a facilitator of creative learning strategies when it comes to skill development.

People can now learn new skills at their own leisure and pace thanks to digital platforms and e-learning tools that have democratised access to education (Koller, Ng, Do, & Chen, 2013).

Furthermore, immersive training experiences using virtual and augmented reality technologies are becoming more common, especially in sectors that demand sophisticated, practical abilities (PWC, 2020).

The convergence of employability, workforce preparedness, and skill development is an important field of research with far-reaching effects on people, businesses, and economies as a whole.

Through an awareness of the critical factors influencing the acquisition and use of skills, stakeholders can develop strategies that improve career possibilities for individuals while also advancing socio-economic advancement in larger circles.

The objective of this study is to analyze these components, pinpoint any gaps that exist, and provide practical suggestions for developing a workforce that is more flexible and resilient.

Table 7: Statistical Analysis of the Impact of Demographic Variables on Technology Adoption

Technology					
Demographic Variables	**Estimate**	**Standard Error**	**z-value**	**p - values**	**Results**
Gender	0.007400	0.010433	0.709337	0.478115	Insignificant
Age	-0.065221	0.032663	-1.996808	0.045846	**Significant**
Education	0.011251	0.034272	0.328292	0.742691	Insignificant
Occupation	-0.065747	0.017053	-3.855403	0.000116	**Significant**
Location	-0.020363	0.018788	-1.083844	0.278434	Insignificant
Individual Income	0.125452	0.038268	3.278222	0.001045	**Significant**
Family Income	0.040052	0.021146	1.894043	0.058219	Insignificant

The study on technology-based skill development and consumer behaviors in India sheds light on critical implications for policymakers, educational institutions, and employers. The unique socioeconomic landscape of India introduces specific nuances that must be considered in the design and implementation of technology-driven interventions for skill development and consumer behavior. The study's findings are in line with recent developments and initiatives aimed at addressing the growing demand for skilled workers and the need for continuous skill enhancement in India.

The demand for skilled workers in India is on the rise due to the rapidly evolving job market, leading to an increasing dependency on technology-based platforms for skill enhancement among students and full-time employees. The accessibility and affordability of online courses and virtual learning tools have made it easier for individuals to acquire and upgrade their skills, thereby improving their employability in the competitive job market.

Moreover, the study highlights the positive correlation between marital status and technology-based consumer behavior, suggesting that married individuals in India may have more stable financial backgrounds and support systems, enabling them to invest in technology-driven skills development and consumer-related activities. This demographic factor should be considered when tailoring interventions to ensure inclusivity and address the diverse needs of both single and married individuals.

The study's observation of a slight positive correlation between individual income and technology-based consumer behaviors in India aligns with the notion that technology can contribute to income enhancement. High-income individuals may have greater access to resources for technology-based skill development, leading to better employment prospects and potentially higher-paying jobs, underscoring the role of technology in socioeconomic mobility.

Given the diversity in occupations, marital status, and income levels across India, the study suggests that interventions aimed at promoting technology-based skill development and consumer behavior should be carefully tailored. Policymakers should collaborate with educational institutions and industry stakeholders to create targeted programs that consider the unique needs of various demographic groups. This may involve subsidizing online courses, promoting digital literacy, and creating mentorship programs to support skill-development initiatives.

Efforts should also be made to bridge the digital divide and ensure equitable access to technology-driven educational resources, particularly in the context of developing and emerging countries like India, where socioeconomic disparities can hinder equal participation in the digital economy. Public-private partnerships can be fostered to maximize the effectiveness of interventions, leading to the development of comprehensive programs that address skill gaps, promote technology adoption, and support overall economic growth.

In conclusion, the study's findings highlight the transformative potential of technology in shaping skill development and consumer behavior in India. By understanding and considering demographic factors, policymakers can formulate targeted strategies that not only enhance individual employability but also contribute to the socioeconomic development of the nation. These findings align with recent initiatives and reports emphasizing the importance of technology-driven skill development and the need to address talent availability and employability in emerging technologies in India.

3.2 Curriculum

Table 8: Statistical Analysis of the Impact of Demographic Variables on Curriculum Adoption

Curriculum					
Demographic Variables	**Estimate**	**Standard Error**	**z-value**	**p - values**	**Results**
Gender	0.031081	0.012005	2.588979	0.009626	**Significant**
Age	-0.058988	0.037499	-1.573052	0.115707	Insignificant
Education	-0.084367	0.039433	-2.139483	0.032397	**Significant**
Occupation	-0.070254	0.019503	-3.602118	0.000316	**Significant**
Location	0.008981	0.021593	0.415908	0.677477	Insignificant
Individual Income	0.210497	0.043918	4.792948	0.000002	**Significant**
Family Income	0.096516	0.024328	3.967291	0.000073	**Significant**

The impact of demographic factors on the perception of curriculum helpfulness provides valuable insights into the relevance and utility of educational curricula. This study examines how gender, education level, occupation, marital status, individual income, and family income influence individuals' views on the curriculum. While a minimal positive relationship between gender and perception of curriculum helpfulness was identified, it was not statistically significant, suggesting relatively similar perceptions of curriculum helpfulness between males and females.

However, acknowledging and addressing subtle gender disparities in educational experience remains crucial for ensuring equitable learning outcomes. The negative relationship between education level and perceived curriculum helpfulness raises intriguing questions regarding the evolving needs of highly educated individuals, emphasizing the importance of continuous adaptation of educational content to meet the dynamic needs of diverse learners. Additionally, the negative relationship between occupation and curriculum helpfulness implies the need to tailor educational content to address the practical needs of different occupational groups, particularly benefiting unemployed individuals by demonstrating the real-world applicability of the skills and knowledge taught. Moreover, the positive relationships among marital status, individual income, and perceived curriculum helpfulness indicate heightened awareness among married individuals and those with higher incomes regarding the importance of acquiring skills for career advancement.

Similarly, the positive relationship between family income and perceived curriculum helpfulness suggests the need for targeted initiatives to make educational opportunities more accessible to individuals from low-income families. These findings underscore the importance of considering demographic factors when designing and implementing curriculum, enhancing the overall effectiveness of educational programs.

Furthermore, ongoing research should explore how curriculum adaptations can better address the evolving needs of highly educated individuals and ensure that educational offerings remain pertinent throughout the various stages of an individual's career.

Understanding the intricate interplay between demographic factors and perceptions of curriculum helpfulness is essential for developing inclusive and effective educational strategies, contributing to a more equitable and responsive educational landscape that meets the diverse needs of learners across various demographic backgrounds.

3.3 Placement

Table 9: Summary of Statistical Analysis on the Impact of Demographic Variables on Placement Outcomes

Placement					
Demographic Variables	**Estimate**	**Standard Error**	**z-value**	**p - values**	**Results**
Gender	0.014867	0.012074	1.231351	0.218191	Insignificant
Age	-0.045896	0.037737	-1.216208	0.223906	Insignificant
Education	-0.068229	0.039682	-1.719414	0.085539	Insignificant
Occupation	-0.076357	0.019644	-3.886967	0.000102	**Significant**
Location	0.030885	0.021738	1.420762	0.155386	Insignificant
Individual Income	0.203970	0.04422	4.61263	0.000004	**Significant**
Family Income	0.088599	0.024485	3.61843	0.000296	**Significant**

The study on the impact of demographic factors on the perception of job training provides valuable insights into how occupation, marital status, individual income, and family income influence individuals' perspectives on the

effectiveness and necessity of job training programs, particularly in the context of placements and securing employment. The findings reveal several key observations that shed light on the nuanced relationship between demographic factors and the perception of job training.

Firstly, the study identifies occupational variations in job training perception, indicating that students and full-time employees may perceive their current academic or professional pursuits as adequately providing the necessary training, potentially leading to the belief that additional job training is unnecessary. In contrast, unemployed individuals may view job training as a crucial resource to enhance their employability and bridge the gap between their current skills and the requirements of available job opportunities.

Moreover, the study highlights the positive impact of marital status and individual income on the perception of job training, suggesting that married individuals and those with higher incomes tend to view job training favorably. This finding underscores the importance of considering socioeconomic factors when designing and promoting job training initiatives. Additionally, the positive impact of family income on job training perception emphasizes the role of financial stability in facilitating access to quality training programs, particularly for individuals from higher-income families.

The implications of these findings for placements and job opportunities are significant. Tailoring job training programs to meet the specific needs and expectations of different demographic groups is crucial. For students and full-time employees, efforts should be made to showcase the practical relevance and added value of additional job training, potentially through partnerships with industry leaders, internships, and real-world application of skills. For unemployed individuals, targeted job training programs and initiatives can be designed to address specific skill gaps and increase employability, with collaboration between employment agencies, educational institutions, and businesses playing a crucial role in providing tailored training opportunities.

Furthermore, programs that consider the unique needs and preferences of married individuals and those with higher incomes can be developed, such as flexible training options, mentorship programs, and career development initiatives. Initiatives should also focus on making job-training programs financially accessible to individuals from lower-income families, ensuring equal opportunities for skill development and job placement.

In conclusion, the study's findings emphasize the importance of a nuanced and targeted approach to job training initiatives, considering the diverse perspectives shaped by demographic factors. By tailoring programs to the specific needs of different groups, stakeholders can enhance the effectiveness of job training to facilitate successful placements and improve overall employability.

3.4 State Gove rnment Schemes

State Government Schemes					
Demographic Variables	**Estimate**	**Standard Error**	**z-value**	**p - values**	**Results**
Gender	0.027098	0.012246	2.212781	0.026913	**Significant**
Age	-0.056425	0.038247	-1.475261	0.140142	Insignificant
Education	-0.124873	0.040287	-3.099603	0.001938	**Significant**
Occupation	-0.051824	0.019887	-2.605913	0.009163	**Significant**
Location	0.052955	0.022051	2.40142	0.016332	**Significant**
Individual Income	0.383985	0.045494	8.440298	0.0	**Significant**
Family Income	-0.009462	0.024753	-0.382251	0.70227	Insignificant

Table 10: Statistical Analysis of the Impact of Demographic Variables on State Government Schemes

The impact of state government schemes on individuals with varying education levels, employment status, and geographic locations is a crucial aspect of exploring key elements of skill development and their influence on workforce readiness and employability. Observations in this regard provide valuable insights into the influence of demographic factors on the perception of curriculum helpfulness.

The study highlights that individuals with higher education may perceive state government schemes as irrelevant, suggesting a nuanced relationship between educational attainment and the perceived utility of these schemes. Policymakers must tailor these schemes to cater to the diverse needs of individuals across different educational backgrounds, ensuring inclusivity and relevance. Conversely, individuals with limited education may find these schemes valuable for personal and professional growth.

The observation that students and employees were more effective in using state government schemes emphasizes the role of time and resources in navigating and applying these programs. Policymakers should consider this aspect and explore ways to make these schemes more accessible to other demographic groups, recognizing potential barriers that may hinder their effective utilization.

The influence of location on the effectiveness of state government schemes highlights disparities in access to resources and opportunities across regions. Policymakers should adopt a geographically inclusive approach that considers the specific challenges faced by urban and rural populations. Enhancing the reach of these schemes to areas with limited resources can contribute significantly to bridging the regional disparities in workforce readiness.

The positive impact of state government schemes on the individual incomes of beneficiaries underscores the socioeconomic significance of such initiatives. By providing financial aid and support to disadvantaged sections of society, these schemes contribute not only to individual well-being but also to broader economic development. Policymakers should continue to invest in and expand such programs, recognize their potential to uplift communities, and foster a more inclusive workforce.

To maximize the impact of state government schemes, an integrated approach that considers education, employment status, geographic location, and socioeconomic factors is essential. Policymakers should strive to create a comprehensive skill-development ecosystem that addresses the diverse needs of the population. This may involve collaboration among educational institutions, employers, and local communities to ensure the effective implementation and utilization of these schemes.
Given the dynamic nature of the job market and educational landscape, continuous evaluation and adaptation of state government schemes are crucial. Regular assessments of the effectiveness of the schemes, coupled with feedback mechanisms from beneficiaries, can inform policymakers about the necessary adjustments and improvements. This iterative process ensures that the schemes remain relevant and impactful over time.
In conclusion, observations of state government schemes highlight the multifaceted nature of skill development and employability. Policymakers should embrace a holistic approach that considers education, employment status, geography, and socioeconomic factors to design initiatives that truly empower individuals across diverse demographics and foster a more inclusive and resilient workforce.

3.5 Sector

Table 11: Statistical Analysis of the Impact of Demographic Variables on Sectors

Sector					
Demographic Variables	**Estimate**	**Standard Error**	**z-value**	**p - values**	**Results**
Gender	0.004482	0.013442	0.333455	0.738791	Insignificant
Age	-0.086222	0.042043	-2.050802	0.040286	**Significant**
Education	-0.025510	0.044169	-0.577557	0.563563	Insignificant
Occupation	-0.149581	0.021996	-6.80039	0.0	**Significant**
Location	-0.017268	0.024201	-0.713495	0.475539	Insignificant
Individual Income	0.279876	0.049337	5.672678	0.0	**Significant**
Family Income	0.081278	0.027247	2.983048	0.002854	**Significant**

The study delves into the relationship between age, occupation, individual income, family income, and awareness of sectors, exploring key elements of skill development and their impact on workforce readiness and employability. The findings reveal significant insights into how demographic factors influence individuals' views on the relevance and utility of educational curricula.

Firstly, the study uncovers a negative relationship between age and the ability to research and find new sectors, highlighting generational differences in career exploration. Younger individuals, characterized by a dynamic career outlook, exhibit a greater willingness to explore and adapt to emerging sectors, leveraging technology and the Internet for effective research. In contrast, older individuals may be more entrenched in established career paths, potentially showing less inclination to switch to new sectors. Recognizing these generational dynamics is crucial for designing interventions that cater to the diverse needs of individuals at different stages of their career.

Moreover, the study identifies a negative relationship between occupation and awareness of one's field, emphasizing a potential gap in knowledge and resources among unemployed individuals. Job seekers may face challenges in updating industry trends and job openings, especially when they lack resources available to those already employed. Conversely, students entering new sectors exhibit a proactive approach to research, highlighting the role of education and training in preparing individuals for success in their chosen fields. Bridging this information gap for unemployed individuals is essential to ensuring equitable access to employment opportunities.

Additionally, the study reveals a positive relationship between individual income and awareness of one's sector, suggesting that individuals with higher income levels are more likely to possess knowledge of their industry. This correlation may stem from their ability to identify and pursue job opportunities that align with their skills and interests. Policymakers and employers should consider strategies to democratize access to information and career resources, ensuring that individuals across income levels benefit from increased sector awareness.

Furthermore, the positive relationship between family income and awareness of sectors implies that individuals from affluent families have increased access to resources and opportunities for sector exploration. While this correlation exists, the small effect size indicates that other factors such as education, personal motivation, and networking may play equally or more significant roles in shaping an individual's sector awareness. Addressing these underlying factors is essential for promoting a more level-playing field and ensuring that awareness-building initiatives are accessible to individuals from diverse socioeconomic backgrounds.

In conclusion, the observations highlight the intricate interplay between demographic factors and sector awareness, emphasizing the need for targeted interventions in skill development and career readiness. By understanding these relationships, policymakers, educators, and employers can collaboratively design initiatives that empower individuals across diverse backgrounds to navigate and thrive in an ever-evolving workforce landscape.

4. Results and Conclusion

The paper aims to identify the key components of skill development and their impact on individuals' employability skills. The methodology used was a questionnaire with closed-ended questions divided into five sections, each with five questions. The sections were focused on technology, curriculum, placement, state government schemes, and sectors. The survey was distributed online and through PMKVY centers, and Cronbach's alpha was used to check the validity and reliability of the data collected. The results showed that technology-based skill development is crucial for students and full-time employees and that demographic factors such as occupation, marital status, and income must be considered when designing technology-based interventions. The study also found that curriculum design, instructor knowledge, and full curriculum coverage before exams are essential for successful skill development.

In exploring the key elements of skill development and their impact on workforce readiness and employability, the observations across various demographics reveal a complex interplay that significantly influences individuals' prospects in the job market. Gender and Skill Development: While the study indicates a minimal positive relationship between gender and the perception of curriculum helpfulness, the disparity is not statistically significant. This suggests that, on average, both males and females perceive the curriculum similarly. However, recognizing and addressing subtle gender differences remains crucial for ensuring equitable learning outcomes and promoting diversity in the workforce.

Education Level and Relevance of Curriculum: The negative relationship between education level and perceived curriculum helpfulness raises questions about the evolving needs of highly educated individuals. It suggests that as individuals attain higher levels of education, they may find the curriculum less relevant, possibly due to having

already acquired the skills and knowledge the curriculum aims to impart. Continuous adaptation in educational content to meet the dynamic needs of diverse learners becomes imperative.

Occupation's Impact on Curriculum Perception: Occupation plays a pivotal role in shaping perceptions of curriculum helpfulness. Unemployed individuals may find the curriculum less relevant, highlighting the need to demonstrate the practical applicability of skills in the context of job-seeking. Tailoring educational content to address the unique needs of different occupational groups ensures inclusivity and relevance.

Marital Status, Individual Income, and Curriculum Utility: The positive relationships between marital status, individual income, and perceived curriculum helpfulness underscore the heightened awareness among these groups regarding the importance of acquiring skills for career advancement. Married individuals and those with higher incomes likely have more responsibilities and financial obligations, driving their recognition of the value in acquiring additional skills for securing higher-paying jobs.

Family Income and Curriculum Perception: The positive relationship between family income and perceived curriculum helpfulness suggests that individuals from higher-income families perceive greater value in the curriculum. This emphasizes the need for targeted initiatives to make educational opportunities more accessible to individuals from lower-income families, ensuring equal participation in the digital economy.

Occupation, Age, and Skill Exploration: The negative relationship between occupation and the ability to research and find new sectors suggests that younger generations have better skills and more interest in exploring new fields. This aligns with their exposure to technology and the internet, enabling effective research. Older individuals may be more entrenched in established careers, contributing to their lower inclination to switch sectors.

Income and Awareness of Sectors: The positive relationships between individual and family income and awareness of sectors indicate that those with higher incomes are more likely to secure higher-paying jobs. The correlation suggests that individuals with greater knowledge and awareness about their sector can identify and pursue opportunities aligned with their skills and interests.

In conclusion, demographic factors such as gender, education level, occupation, marital status, and income levels exert a profound influence on individuals' perceptions of curriculum helpfulness, skill exploration, and sector awareness. Policymakers, educators, and employers must adopt a nuanced approach that considers these demographic nuances. This involves tailoring educational content, skill development initiatives, and workforce readiness programs to address the diverse needs of individuals across various demographic backgrounds. By doing so, we can contribute to a more inclusive, equitable, and effective system that prepares individuals for success in the ever-evolving job market.

References

1. Azevedo, J. P., Hasan, A., Goldemberg, D., Iqbal, S. A., & Geven, K. (2020). "Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes: A Set of Global Estimates." World Bank Group.
2. Bessen, J. E. (2019). "AI and Jobs: The Role of Demand." NBER Working Paper No. 24235.
3. Brynjolfsson, E., & McAfee, A. (2014). The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies. W.W. Norton & Company.
4. Buckingham, D. (2007). "Digital Media Literacies: Rethinking Media Education in the Age of the Internet."
5. Carnevale, A. P., Smith, N., & Strohl, J. (2013). "Recovery: Job Growth and Education Requirements Through 2020." Georgetown University Center on Education and the Workforce.
6. Crompton, H. (2013). "Mobile Learning: New Horizons for Educational Research."
7. Deterding, S. et al. (2011). "From Game Design Elements to Gamefulness: Defining 'Gamification'."
8. Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). "Employability: A Psycho-Social Construct, Its Dimensions, and Applications." Journal of Vocational Behavior, 65(1), 14-38.
9. Goldin, C., & Katz, L. F. (2008). The Race between Education and Technology. Harvard University Press.
10. Hrastinski, S. (2008). "Asynchronous and Synchronous E-Learning."
11. International Labour Organization. (2019). Skills and jobs mismatches in low- and middle-income countries.
12. Knewton (2017). "Adaptive Learning Platforms: Enhancing Education."
13. Koller, D., Ng, A., Do, C., & Chen, Z. (2013). "Retention and Intention in Massive Open Online Courses: In Depth." Educause Review.
14. McKinsey & Company. (2020). The future of work after COVID-19.

15. Merchant, Z. et al. (2014). "Effectiveness of Virtual Reality-Based Instruction on Students' Learning Outcomes."
16. National Skills Coalition. (2017). The Skills Gap and the Future of Work.
17. Noe, R. A., Clarke, A. D. M., & Klein, H. J. (2014). "Learning in the Twenty-First-Century Workplace." Annual Review of Organizational Psychology and Organizational Behavior, 1(1), 245-275.
18. OECD. (2019). "OECD Skills Strategy 2019: Skills to Shape a Better Future." Organisation for Economic Co-operation and Development.
19. PWC. (2020). "The VR Advantage: How Virtual Reality is Redefining Soft Skills Training." PricewaterhouseCoopers.
20. Selwyn, N. (2016). "Education and Technology: Key Issues and Debates."
21. Shuler, C. (2012). "Mobile Learning: The Next Evolution in Education."
22. UNESCO. (2018). "Transforming Technical and Vocational Education and Training (TVET)." United Nations Educational, Scientific and Cultural Organization.
23. van Dijk, J. (2020). "The Digital Divide: Impact on Education and Society."
24. Watson, J. (2017). "Blended Learning: The Convergence of Online and Face-to-Face Education."
25. World Economic Forum. (2020). "The Future of Jobs Report 2020." World Economic Forum.